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AMERICAN VETERINARY REVIEW.

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CONTENTS.

	PAGE
Editorial.—European Chronicles.....	645
The New Haven Meeting of the A. V. M. A.....	652
Meat Inspection in Other Lands.....	653
Dr. Salmon's Work in Uruguay.....	654
Good News from Canada.....	654

Original Articles.—The Veterinarian as a Business Man. By D. Arthur Hughes.....	655
The Effect of Chloroform on the Respiratory Tract of the Horse. By Newell D. Backus and Percy J. Axtell.....	674
The Progress of the Veterinarian in the Philippine Islands. By David G. Moberly and Robert H. McMullen.....	685
Hypodermic and Intravenous Medication. By N. I. Stringer.....	692

Reports of Cases.—Osteomyelitis in a Dog. By W. Reid Blair.....	696
Plenalvia in a Holstein Cow. By Albert Babb.....	698
Rupture of the Heart. By Martin R. Steffen.....	700
Rheumatism(?). By Martin R. Steffen.....	701

A Needle and Thread in a Cat's Jaw. By R. A. Stoute.....	701
Contribution to the Records of Fecundity. By F. P. Scott.....	702
Surgical Items.....	708
Army Veterinary Department.....	706
German Review.....	717
Italian Review.....	721
Bibliography.....	726
Obituary.....	727
Strictly Germ Proof.....	728
The Country Vet.....	728
Correspondence.....	729
Society Meetings.....	731
American Veterinary Medical Association.—Illinois Veterinary Medical Association.—Veterinary Medical Association of New Jersey.—Genesee Valley Veterinary Medical Association.—New York State Veterinary Medical Society.—Michigan State Veterinary Medical Association.....	733
News and Items.....	735
Veterinary Medical Association Meetings.....	735
Publishers' Department.....	736

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AMERICAN VETERINARY REVIEW.

SEPTEMBER, 1906.

Correspondents will please note the change in address of Dr. Roscoe R. Bell, from Seventh Avenue and Union Street, to 710 East Second Street, Borough of Brooklyn, New York City.

EDITORIAL.

EUROPEAN CHRONICLES.

PARIS, FRANCE, July 15, 1906.

THE UNVEILING OF THE MONUMENT TO NOCARD.—I was enabled in my "Chronicles" for August to present to our readers the outlines of the ceremonies attendant upon this important occasion, together with a fairly good photographic reproduction of the monument erected in commemoration of the great work of the lamented Edmond Nocard by the veterinarians of the world. When the cloth that covered the monument fell down, a closely resembling bust of Nocard appeared, mounted on a superbly polished granite pedestal three metres high. At the foot of it there is an allegorical group, presenting in the centre a woman, symbolizing Science, and registering the discoveries of the Master; on the right a country girl glances to Nocard with an appealing eye, while on the left a young shepherd presents him with a palm. Immediately below the bust a gilded inscription reads:

TO EDMOND NOCARD

1850—1903

HIS COLLEAGUES, HIS STUDENTS, HIS FRIENDS

As I have said, several speeches were delivered, and among the principal parts of the numerous eulogistic remarks that were made there were those pronounced by the Secretary of Agriculture, who very properly closed his speech by saying: "By his contributions to the study of contagious diseases, which he carried out with the most rigid experimental methods, Nocard has thrown a powerful light upon a profession too long unappreciated. Follower of Bouley, of Chauveau, who are with him in the glories of veterinary science, he succeeded, as Pasteur did, in relieving human sufferings. His work was the kind which classes a man among the great Masters, and among the benefactors of humanity."

And now the statues of three illustrious men are in the *Cour d'honneur* of Alfort: Bourgelat, Bouley, Nocard. Three great men marking three stages in the history of veterinary medicine. Bourgelat, its youth, with its obscurity and difficulties in developing; Bouley, perhaps its apogee, with its great practical clinical applications; Nocard, the full and vigorous state, not yet entirely developed, but advancing, progressing, and entering firmly into the paths of the glorious and scientific usefulness to which veterinary science will not fail to reach.

* * *

FRENCH HORSE SHOWS.—There have recently been three events here which show that if France is the country of automobiles, the horse is far from being killed off and the race from disappearing.

After the admirable exhibition of the *Concours hippique*, which corresponds to our American horse show, and where many prizes of value were fought for and distributed to superior specimens of horses, superior in their qualities, in their forms, and, above all, in their abilities to perform special work,—after this concours, we had the *Congrès hippique*, where important subjects relating to the breeding and raising of horses were considered and discussed before an assembly of about six hundred breeders from all parts of the country. Among the papers read was one from Mr. Lavalard, honorary member of our national

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association, the A. V. M. A. (who, by the way, has just informed me that he has at last received his certificate of honorary membership). It would have been a great treat for any American horseman, breeder, or veterinarian, to hear Mr. L. so loudly speak of the qualities of the American horse, of the manner in which he is raised and of the care that Americans bring to bear in the selection of their stock for breeding purposes and the making up of their stud-books.

* * *

The third event of the season has been the *Concours central*—in other words, another show for the stud animals (horses and asses). This was most important. Organized under the auspices of the Secretary of Agriculture, it brought together the finest specimens of the equine race in this country. There were nearly one thousand animals entered, and among them were: English, Arab, Anglo-Arab thoroughbreds, and then came in greater number the half-bred horses: Arabs trotters, Anglo-Normans, Normans, Vendéans, and Charentais, etc. The "postiers," the draught-horses, represented by the Ardennais, the Boulonnais, the Bretons, Nivernais, and Percherons. An important section of the show was devoted to mules and asses, and quite a number of animals belonging to this class were the objects of interesting examinations. Ugly as these subjects appear to the layman with their long ears, rough, matted coats and their peculiar aspects, they nevertheless drew considerable attention, which can be appreciated when one takes into consideration the fact that mule-raising is quite important in some parts of France.

* * *

THE NATIONAL VETERINARY CONGRESS.—And finally we had this event, of which I have already said a few words in my "Chronicles" for June. The Vth National (or Nocard's) Congress, as it is to be known, is peculiar, resembling somewhat our association, in that every veterinarian can be a member; it differs from it in that the membership ceases with the close of the work of the Congress. At the meeting, therefore, are seen

private practitioners, and then delegates of the various societies and of many of the professional syndicates that exist here. This year the attendance was quite large; no doubt the ceremony of unveiling the monument to Nocard brought many, while the banquet which closes the meeting, was an attraction for some.

The work of this gathering, however, differs from that of our organization. There is no reading of papers, no clinics, no excursions, no program of distraction—only solid work and stern discussion. The subjects have been placed in divisions by a committee; they cover points essential to the profession at large; they interest veterinarians only; and of course, ladies are not found at the meetings, as they were at St. Louis, Cleveland, etc. As an evidence of what might sometimes be considered by outsiders as dry subjects, the Vth National Congress treated in the five days it lasted: (1) of the central and departmental organizations of the veterinary service; (2) of the breeding of horses and organization of haras; (3) of the reform of veterinary education; (4) of the general organization of meat inspection, and (5) of the control of milk production.

* * *

I do not think the discussions on these various subjects can have much interest for our American friends, with the exception of the third—the reform of veterinary education. I have already mentioned the demands made by the chairman of the committee which reported on this subject; permit me to give the conclusions that were adopted. A comparison will prove interesting.

Resolutions adopted.—(1) That in the shortest time possible, external students shall be obligatory in all veterinary schools; (2) that besides the degree of bachelor demanded of candidates for admission in veterinary schools, knowledge in chemistry, physics, and natural history be required; (3) that the title of doctor of veterinary medicine be granted; (4) finally that important changes should be made with the object of modifying, improving and insuring the recruiting of the teaching body of veteri-

nary schools with the means to improve their conditions; that in the shortest time possible reforms in education be established so as to bring out not only superior practitioners, but also specialists in sanitary police, hygiene, inspection of meat, etc., or of any similar work of an administrative nature.

How many of these propositions and votes will be realized is another question.

* * *

VETERINARY EDUCATION.—While I am considering the subject of education, I must relate part of a report made on the subject by the professors of the University of Rome, in Italy, and which I find taken from the *Goirnale della Reale Societa* by the *Revue Generale*. It covers three points:

(1) *Insufficiency of the fundamental instruction for admission in veterinary schools.*—Baccalaureate ought to be required. It is a moral necessity to raise the standard of the profession. If it is not demanded the public will believe that the study of veterinary science is trifling.

(2) *Insufficiency of the teaching of hygiene and zoötechny.*—They must be taught minutely. Hygiene to include etiology, chemical, physical and bacteriological analysis of air, water, soil, disinfections, vaccinations. It belongs partly to general pathology and to pathological anatomy. Zoötechny demands also a special scientific preparation. It requires a teaching essentially practical and cannot be taught with plates, no more than obstetrics.

(3) *Insufficiency of teaching by bovine clinics.*—Well regulated clinics, inspection made out of the schools, ought to be organized in all the schools.

I hope these movements occurring in the old veterinary schools of Europe may prove valuable suggestions in America, where schools do not yet have to fight the routine of years to realize the improvements they are so much in need of.

* * *

AMERICAN MEAT SCANDALS AND THE FRENCH PRESS.—As can be easily imagined, the scandal that has been raised in relation to the work of the meat packing establishments has at last

found its echo in the journals here. Of course, the interest is not as great as in other countries, the use of preserved meat being almost unknown in France. Nevertheless, the subject has found place in our daily and a few of the scientific papers. The opinions and the remarks vary, but I must confess that many are rather unfavorable to the packers. Why? I am sure their authors would be embarrassed to tell. I have just seen the following in a good and sound agricultural paper. How can a sensible man give hospitality to such absurdity? I translate the article:

"An official inquest has revealed frightful facts, which are of daily occurrence in the great factories of preserves in Chicago. In those, pigs that had died of hog cholera are used and their fat employed for the fabrication of oil for conserves of sardines; hams in putrefaction have been made inodorous with chemical preparations; other similar compounds have been used to color bad meats; sheep that have died from disease are also employed; sausages are made from scraps sprinkled with chemical substances to give them taste; tuberculous meat is used; and, finally, a fact still more horrid, it is said that workingmen having been caught in the wheels of the machinery, the work was still kept up, and crushed human meat was mixed up in the making of sausages, in the preparation of the preserves."

Can ignorance excuse such absurdities? and how can the people of Europe be made to understand that the Bureau of Animal Industry, that the sanitary inspection of meat and of the various industries related to it, are organized in the United States as no one in Europe is, and that the frightful stories related are silly and untrue.

* * *

IMMUNIZATION AGAINST TUBERCULOSIS is always the question of the day, many are the experiments that are made, and society meetings hear of the results that are obtained. At one of the last gatherings of the Société de Médecine Vétérinaire Pratique, Prof. Vallée made an important communication. After relating briefly how he had made known a process by

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which hypervaccination of horses with tuberculous bacilli of human origin and strongly virulent was obtained, he stated that he was now studying the qualities of the serum of these horses, and was searching to find out if these qualities were not more marked, to the therapeutic point of view, than those of the serum of bovines hyperimmunized with the method of Behring, which in fact almost do not exist. He then presented to the society the cadavers of guinea-pig, inoculated with human tuberculosis and then treated with the serum of the horses submitted to repeated inoculations of human tuberculous bacilli. Although the action of the serum was imperfect, in that it did not arrest entirely the development of tuberculosis, it is nevertheless more than evident. The serum certainly interferes with the morbid process. With calves the action is still more manifest. An animal infected by venous injection, then treated with weekly inoculations of serum, shows a very encouraging result. While the witnesses die with generalized tuberculosis, in 30 or 40 days, the animals treated have no thermic reaction and at post-mortem exhibit only trifling lesions, when compared with those of the witnesses.

Prof. Vallée believes that to be more effective the anti-bacillar serum ought to be injected with an anti-toxic serum, obtained from horses treated with successive inoculations of tuberculous bacilli, killed by a special process, which he will describe later, and which, besides the rapid absorption of these bacilli, insures also the conservation of the toxin that they contain. These same bacilli can be used for the quick vaccination of young animals, thus avoiding the possibilities of contamination of the subjects which are kept in infected localities, a condition which cannot be avoided with the methods of vaccination already known.

* * *

The Director of the Pasteur Institute at Lille, Dr. Calmette, recently made a communication on the subject of vaccination against tuberculosis, when he recorded that while continuing his investigations upon the intestinal origin of pulmonary

tuberculosis, he had observed that young calves, which were made to take in two meals, forty-five days apart, a small quantity of tuberculous bacilli, attenuated or altered by heat, became perfectly vaccinated against virulent tuberculosis infection by the digestive tract. Vaccinating bacilli, like the virulent, pass through the intestinal mucous membrane and are stopped and destroyed by the lymphatic glands. Therefore, young bovines can be vaccinated by a method that is absolutely harmless, much more simple, and in all truth as efficacious as that of Behring, which has not yet entered into general practice, notwithstanding all the booming it has received.

Dr. Calmette goes so far as to say that he thinks this method could be applied to mankind. Children should be protected from a natural tuberculous infection by receiving, a few days after birth, and a short time afterwards, a small quantity of tuberculous bacilli of human or bovine origin, in which the virulence would have been attenuated by heat. But a condition for success is essential: that they should for four months after be kept away from any tuberculous contamination.

After all, this is but a step forward among the numerous questions relating to vaccination against tuberculosis.

* * *

ERRATUM.—August REVIEW, page 526, last line but one, "eye" should read "age." A. L.

THE NEW HAVEN MEETING OF THE A. V. M. A.

The record of the 43d annual meeting of the American Veterinary Medical Association is all that is left of the great event which we have been anticipating with so much pleasure for many months, and a splendid record it is! Elsewhere in this number will be found a concise summary of the chief events of the session, but those who were absent must forever be great losers through their failure to be active factors in the proceedings.

All things conspired to make the meeting a glorious season of profit and pleasure, except the weather, which was humidly

hot. Everything else was right: attendance the largest ever, 374; literary program overflowing; clinic best in our history; discussion intensely valuable and spirited; work along educational lines encouraging, and all interspersed with the most fascinating diversions, which were enjoyed in the company of the largest number of ladies who have ever graced our delightful annual event.

We have neither the space nor the time at our command to analyze the various factors which conspired to make this meeting superior to all of its predecessors, but as an example of the character of the work accomplished we direct attention to the resolutions adopted as an expression of the sense of the members upon the chief events of the day as they relate to veterinary progress. They are of a high order, and reflect dignity and respect upon the scientific organization which promulgated them.

MEAT INSPECTION IN OTHER LANDS.

A chief sanitary inspector in England has reported at a recent convention of sanitarians that he has made "a careful inspection of the slaughter-houses of England and has seen things that compare unfavorably even with conditions alleged to exist in the great packing plants in the American city." Such an admission in the face of the sensational statements persistently indulged in by the scandal-mongering yellow press, which are conservatively estimated to have been 75 per cent. exaggeration, is a poor showing upon which to base such serious accusations as those made by the London *Lancet* some time ago. The latter publication is beginning to exhibit a return to sanity when it says that "a large part of the imported meat of London, including much of the chilled and frozen meat from the United States, is, in regard to disease and cleanliness, more satisfactory than much of the meat at home." Let the slanderers of American meats and methods spread the news that our products and our systems of inspection and control are now the best in the world.

DR. SALMON'S WORK IN URUGUAY.

The REVIEW feels very much inclined to engage itself to never again accept any statement in the daily press which deals in any degree with veterinary topics. When it became public property that Dr. Salmon had accepted a call from the Uruguayan Government every metropolitan paper gave the details of the work which he was to undertake, which was the organization of a department of animal industry upon somewhat similar lines to the one he established and so successfully conducted in this country for more than twenty years. In commenting upon his new mission the REVIEW reiterated the information contained in the dailies, and wished its colleague long life and happiness. A letter received since from Dr. Salmon contains the information that he has not engaged to do any sanitary work at all—that the position which he has accepted is that of Director of the Veterinary School of the University of Montevideo. He further states that he has not yet been informed from whence his faculty will be recruited, and that the statement that he would take his staff with him from this country was without foundation.

GOOD NEWS FROM CANADA.

THE glad tidings were officially announced at the New Haven meeting of the A. V. M. A. that the efforts to place veterinary schools in the Dominion of Canada upon a higher plane have been successful, and that in 1907 the Government will assume control of the Ontario Veterinary College, raise its standard to three terms of six months each, extend its curriculum, and altogether place it in the front rank of veterinary colleges of North America. Every loyal veterinarian in the land proclaims a loud "Amen."

READ CAREFULLY THE "ARMY VETERINARY DEPARTMENT" this month. Dr. Jewell's paper on "The Veterinary Service in the U. S. Army and the Military Veterinarian" will place the reader in possession of the conditions and needs of the service.

ORIGINAL ARTICLES.

THE VETERINARIAN AS A BUSINESS MAN.

BY D. ARTHUR HUGHES, PH. D., D. V. M., CORNELL UNIVERSITY.

"Put money in thy purse."

Iago in "Othello."

Presented before the 43d Annual Meeting of the A. V. M. A., New Haven, Conn.,
August 21-23, 1906.

Every one of the gentlemen in this assembly will remember the allegations of the agricultural press in certain quarters at the time of Dr. Salmon's resignation as Chief of the Bureau of Animal Industry, U. S. Dept. of Agriculture, last October. If I mistake not, the principal statement made by the agricultural interests in one quarter was: that a "practical stockman" should succeed Dr. Salmon instead of "a scientist." In the course of the plea made in behalf of a practical stockman—though no candidate was named by those who made the plea, nor did a candidate ever come forward to represent them—certain representatives of the live stock interests gave vent to a specious argument, which was substantially as follows: The administration of the affairs of a Government Bureau, which concerns itself with the interests of the national live stock industry, is mainly a matter of business and calls chiefly for business ability. A practical stockman, with a long experience in the commercial life of the industry, at the same time who has large administrative ability, is the right kind of a man to choose for the responsible position of Chief of the Bureau of Animal Industry. The scientific man, these malcontents said, by his training and by the nature of his interest in purely scientific questions is thereby unfitted for an understanding of the business side of the trade. On analysis, the main contention of those who made this specious argument appears to be: a scientist cannot be, or is likely not, a man of business. To put their thought succinctly: scientific ability and business ability are incompatible in the same person.

The members of the American Veterinary Medical Association were quick to see the danger of the movement. Briefly it was this: the position of Chief of the Bureau of Animal Industry might be lost to the veterinary profession. The agreement was made that this must never come to pass. The men of the profession arose *en masse* with Herculean strength to prevent it. The fundamental law which founded the Bureau in question, it so happened, read: the Chief "must always be a veterinarian." Congress has not yet convened. Though Dr. Melvin had not received the largest vote in a canvas made for the voice of the members of the American Veterinary Medical Association on the candidates nominated by its executive committee, he was a strong second choice. This vote of confidence of the Association, coming at a time when the tide in the agricultural press had turned powerfully in Dr. Melvin's favor, encouraged Secretary Wilson, who had had long acquaintance with his work as Assistant-Chief under Dr. Salmon and knew him as a trusted official, to take advantage of the fundamental law, which plainly said a veterinarian should head the Bureau, and move him up to the position of Chief.

Notwithstanding the fact that this appointment made the endeavors of certain stockmen, through organs of the agricultural press, to prevent veterinary succession to the office of Chief, null and void; though the danger is passed, when we remember the agitation which the events leading to the appointment caused, we cannot pass by lightly the contention that it is improbable or impossible that the scientist could be a business man. I would therefore lay before you a defense of the American veterinarian as a business man.

I. THE FUNCTION OF THE VETERINARIAN AS A BUSINESS MAN.

Before we can successfully defend the veterinarian as a business man we must determine what is the function of the veterinarian and trace, in its broadest outline, what the purpose is he has in view as a worker.

Certainly the purpose of the veterinarian as a business man

is not primarily to pile up money nor accumulate property. That is the purpose of all business men in commercial life; but the man in the medical professions has, first of all, an interest in the service he gives for its own sake. If it were true that veterinary science were solely a matter of business, in this very admission we would have sanction for sharp practice which our professional ethics eschew; we would have no frown for the man who connives and schemes to make money by fair means or foul. Ours is essentially not a commercial occupation, but a professional occupation, and certain moral principles govern us in our practice which do not enter in commercial competition nor find place in the commercial world.

The functions of the veterinarian in his vocation, wherein he applies medical principles, are essentially threefold, to wit: the administration to the needs of sick animals; the prevention of the passing of diseases from animal to animal; the prevention of the passing of disease from animals to man. In the one case he is a physician and surgeon to animals; in the other veterinary sanitarian or public sanitarian.

The purposes, therefore, that he has in view, as a practical worker, are the healing of the sick and the prevention of sickness. As an honest scientific man these are the purposes he has in view whether he be a private practitioner, or a teacher, or whether he be employed in the service of a city, state or national government.

Preoccupied as every true veterinary scientist is with the desire to do things entirely for scientific reasons known to him as a professional man, he nevertheless must, without he be removed by the good favors of fortune from such a mundane question, take into consideration the question of personal profit which will give him a living. The obtainment of a better living and greater personal, pecuniary profit depends in the long run on three things: veterinary learning, skill and business capacity. All three of these may be employed for pecuniary profit in one or both of two directions—the application of the principles of veterinary medicine and surgery in private practice;

the application of the principles of veterinary medicine and surgery in some form of government service.

We have said that veterinary learning, skill and business capacity constitute the three necessities for financial success; they together are the *sine qua non* of that success. A man may have immense learning in the science but if he has not skill in its application and at least a measure of business capacity his career will end in fiasco. He is not likely to be very skilful in the application of the principles of veterinary medicine or surgery unless he has the scientific knowledge which it implies. Nor possessing both will he be a great financial gainer unless he can take advantage of his knowledge and skill for monetary ends.

We may now determine what is meant by veterinary learning, skill and business capacity in order that we may discover the degree of success obtained by veterinarians as business men in our day. Perhaps, too, in doing so, we may find an omen for the future business success of men of this profession.

1. *What is meant by veterinary learning.*

Scientific information which counts for anything in the business success of a veterinarian is from two sources: that which he gets at college; that which he gets experientially after leaving his *alma mater*. The broader the collegiate foundation of his knowledge the better the chance to make it good in the hard world of practical experience, whatever and wherever be the veterinary service rendered, whether in private practice or in government employ.

Collegiate life must be given up largely to theory. A large part of the endeavor is: to learn the myriad ascertained facts of the science; the technical theories which explain phenomena; the demonstration of theory by multitudes of experiments; the furnishing of means of practical application of the theory of medicine in clinic and operating room, together with a utilization of the knowledge of ascertained facts taught in earlier years of technical study. The means for obtaining these ends—learning of fact, demonstration of theory, and practical

application of theory and fact—differ in the various collegiate courses. Yet in each course the same end is kept in view. The question which vitally concerns any man's future success in the profession is: how well was the theory of medicine taught him in the institution where he was trained. In other words the question which concerns his future is: how broad was his educational foundation, was his course a smattering of a few studies in the science, or did it consist in laborious nights and days covering every field of knowledge to which we have fallen heir. The fashion is in certain quarters to scoff at theorists, theorizing and the learning of theory. Nevertheless it yet remains to be demonstrated how it is possible to make a man highly successful in the application of the principles of medicine and surgery unless he is very well taught these principles first. The wider the knowledge of medical theory the better chance a man has for success in the practical application of it.

Practical life is largely given up to the application of the theory. Moderate learning, high learning, count for little if scholarly studies of some sort are not continued after leaving college halls. This is the reason for many a man's failure in the professional business of practical life. The two key words for success in practical, professional life are: adaptability having knowledge for the occasion; studiousness, continued scholarly industry. Men with small learning at the beginning of their careers by industry have acquired great practical usefulness. Some men with large scholarship have made failures by lack of ability to adapt it to practical ends in the alleviation of suffering or prevention of it. Just as the chameleon can change its color to suit the occasion so we must have a varied adaptability if our knowledge is to win success. The more varied our knowledge and use of it the more our reputation increases and our success is assured. We are constantly reminded of our ignorance by the new conditions found. The point in the determination of our future success in a like situation is have we taken advantage of the difficulty by equipping ourselves for a similar one in the future. Hence the value of studiousness.

Here is the advantage professional men have over other workers: the more their professional knowledge increases, the wider their practical experience, the more valuable they become to the public. Until the moment of senility approaches, with advancing years, the more useful they may become. In most occupations fate acts just the other way.

2. *What is meant by skill.*

A man's value to the public consists not alone in the scientific information he has, whether obtained in his college days or since, but in the skill with which he can use it in keeping with the needs of the occasion in practical life.

We are apt to confine the meaning of the term skill to dexterity in the use of the knife or success in dosage. But in reality this is a limitation of the meaning in payment of tribute to the conceit of some very worthy private practitioners. Skill in veterinary science consists in ready application of knowledge of veterinary science for practical usefulness in any form. We have, for example, the skilful veterinary hygienist or sanitarian; skilful inspector of animals or meats for diseases; skilful communicator of veterinary advice orally or in written form, or consulting veterinarian; skilful veterinary publicist; skilful administrator of veterinary law; skilful investigator in laboratory and field; skilful disseminator of knowledge in educational lines. Each of these is capable of subdivision. Yet a person coming under any of these classes may be exercising great skill, after his own particular gift, in utilizing veterinary knowledge for the public needs as occasion may demand. With the multiplication of veterinary interests has come the multiplication of needs for veterinary knowledge and the occasions for its exercise. There is a call for the exercise of our knowledge in directions before unguessed. There is therefore a necessity for preparedness, constant study, rapid and sure professional judgment. Expert specialized information is what is wanted.

We should know where to get information, what to do at any time, how to act and what to say. The demand is for skilful

exercise of professional intelligence, or, better, specialized veterinary intelligence.

3. *What is meant by business capacity.*

The chief difference between a man with business capacity and one without it, consists in the ability to systematize or to organize work so that it can be done accurately and expeditiously. There has recently begun publication a magazine for men in commercial life called *System*, edited by Albert Shaw, who is also editor of *The Review of Reviews*. The name is well chosen, for system usually marks the work of all men successful in commercial careers. The Americans are great organizers and they do not choke their organization with red tape. Simplicity, expeditiousness, are the two watchwords. Business ability exercises itself in the making of plans temporary or permanent for the rapid and successful conduct of work. It forms into a compact system new work as it appears, designating its class, the workers to do it and how it should be done. In commercial life, where the making of money is the end, the watchwords are always rigid economy where it is possible, the responsibility of lower to higher officials and of the higher to the head. The ability to organize and administrate are different exhibitions of one and the same gift. Ability as an organizer differs in degree but not in kind.

Is there any difference between scientific organization and commercial organization? There is a close verisimilitude between commercial organization and scientific organization; both requiring the same gift though the purpose of each is different. The purpose of a commercial organization is solely to make money; that of a scientific organization either to obtain knowledge or disseminate it, either to increase the intelligence of its members or to utilize that knowledge for the service of the people. The business capacity of the American veterinarian has commonly found exercise, therefore, in one or more of the following directions. First, institution of organization for the increase of veterinary intelligence among graduate veterinarians and prospective veterinarians. The organization of

graduate veterinarians for mutual help are the American Veterinary Medical Association, the state, county and city organizations. The organizations for prospective veterinarians are the schools of veterinary medicine throughout the country. Second, organization for the furtherance of private interests. Third, organizations for the veterinary interests of the states. Fourth, organization under federal statute for the veterinary interests of the nation.

As we have now an understanding of the function of the veterinarian in business matters, we can more closely scrutinize the allegation of business incapacity hinted at by certain stockmen last October, then advance the evidence for its disproof.

II. VINDICATION OF THE AMERICAN VETERINARIAN AGAINST THE CHARGE OF BUSINESS INCAPACITY.

We do not deny that there are graduate veterinarians in America without much business capacity; perhaps, as is true of all professions, there are many of them. What we deny emphatically is that a scientist, trained in the application of medical principles to the care of domesticated animals, is of necessity unfitted thereby for high business position where such technical knowledge is indispensable. We deny that technical knowledge and business capacity are impossible in the same person. We deny that a scientist cannot be a highly successful business man.

Veterinary science is nothing if not for practical application. The nature of veterinary work tends to keep men in touch with the live stock business in all its aspects, with the traders and the trade. Trade journals are apt to be his companions; trade questions are apt to be those which stir his mind. Looking at the matter from the financial side alone, his own enrichment depends upon the value of animals he treats; his fees fluctuate with animal values. Veterinarians are apt to be stockmen by nature and experience; often they are the sons of farmers and stockmen. The farther afield they go in any form of veterinary practice (and there are many forms) the more inti-

mate becomes their acquaintance with live stock problems, whether they be scientific or commercial. When we consider for a moment the kind of man who was desired by stockmen for Chief of the Bureau of Animal Industry from the point of view of the best interests of the trade, both scientific and commercial, we can see at once how foolish was their request as well as how groundless was their argument. They desired a man with purely commercial instincts and executive gifts, experienced in the trade and yet with a brain not burdened heavily with scientific information, which they intimated would render valueless his business keenness. They overlooked the fact that there is hardly a problem in the live stock trade which does not turn out to be at bottom scientific and calls for scientific information. A man having none other than commercial faculties, be those faculties ever so keen, would find himself at sea as head of a scientific Bureau of the Government. Though it is true that a veterinarian, by the nature of his work, tends to become more and more intimately acquainted with commercial problems of the trade, and this is particularly true of a veterinarian in the service of the Government, on the other hand a trader, or one versed merely in trade points of view, cannot understand technical questions in veterinary science which call for mastery of specialized knowledge. The truth is that no greater wisdom was ever shown by the powers that sit in high places at Washington than when they incorporated into the fundamental law of 1884—under which the Bureau was formed—the phrase, “the chief shall always be a veterinarian.”

Yet it is a curious thing to notice at this late day, now that the question of successorship to the chiefship has been settled, that the minds which were acute enough to know the desirable points to be possessed if possible by candidates for that exalted professional position were not also acute enough to notice the trend of the times in the matter of governmental appointees. The success of the Civil Service Act, and its favor in the eyes of the people, has of late years greatly altered the situation of affairs in government appointments. The changes which have

governed in the promotion from low government position to higher place under the Civil Service law obtain also in the matter of appointees to still higher position. The whole tendency of the times is to place men by merit and length of service to higher and higher government office. Numerous scientific positions which were filled by political appointment in the old days are now filled by promotion from the civil service list. This simple fact seems to have been entirely overlooked in the agitation for appointment. The different branches of the scientific service of the government would be demoralized if each chief chosen was merely a political appointee. There would be no use for worthy young men to have ambition to rise to the highest station in their respective branches of the service. If it were found necessary to take a man from without, each time a scientific chief steps out, there would be no value in promotion under the Civil Service Act. Length of faithful service, the value of experience in the scientific branches of the government, would count for nought. The system upon which the scientific branches of the government was built would be a sham.

Again, so little was said by Dr. Melvin and his colleagues about his candidature that I venture to say that less was known about him than of any other man who aspired for the office. This is not wondered at by those who are in, or have regularly been in federal work and know the rules governing persons in the civil service list, or are aware of the tendency in the formation of rules setting forth their rights and privileges. Under the Civil Service law a man is almost entirely responsible for his acts to his immediate superiors. In his desire to rise he is handicapped by the fact that he is open to censure if he attempts to get office by political jobbery. He has little power to electioneer in his own behalf. The executive's rules tend to hem him about so that he must fall back on his own conspicuous merit and length of service to receive promotion. The tendency is to exclude men from doing anything but government business. Everything is done to make men devote them-

selves more and more to government business only—that is the effort is to create greater merit among the men and make them more worthy of promotion. It was well nigh impossible for Dr. Melvin to plead his own cause, even if he had wished to do so. His office forbade him. The general public is ignorant of the working out of the Civil Service Act in so far as it governs the conduct of employés, having only a dumb satisfaction in the merit system as such. Nay, more, the majority of American veterinarians, and shall I say the cream of the profession which is found in the American Veterinary Medical Association, are probably ignorant of the inner workings of the Civil Service Act.

The situation of affairs, preceding the appointment we are at this moment discussing, was a peculiar one in the history of veterinary medicine in this country. It was different from what it appeared to be. To the veterinary profession the all important question was the placing of some meritorious veterinarian in succession to Dr. Salmon as Chief of the Bureau of Animal Industry. The real question was should politics or any other machination prevail in the appointment of such a chief, or should promotion to that position be made under rulings of the civil service system.

The appointment of Dr. Salmon himself had been political in a good sense. The man was a man of merit, aside from the political influence which brought about his appointment. Excellently trained in veterinary science at Cornell University and at the National Veterinary School at Alfort, France, he was a professor in the University of Georgia and had held responsible position under the federal Commissioner of Agriculture before he was designated to organize the new Bureau of Animal Industry under Commissioner Loring. Dr. Salmon had high gifts in leadership. He organized the Bureau and was its Chief for twenty-two years, seeing it come out from insignificance to become the most influential Bureau in the Department. When he was at the pinnacle of his fame as a veterinary leader the system which he had instituted was far famed as a model national or-

ganization for the care of animal health and animal wealth. Dr. Salmon was the author of a long series of scientific papers on the problems confronting his scientific branch of the government work. The highest professional intelligence prevailed in all his writings. He excelled in scientific exposition and argument and his conclusions were those of the statesman who saw the full outcome of the scientific advice he gave in every situation. He made many scientific investigations himself and initiated or set in motion numerous other investigations. He was gifted as an investigator, as a writer, as a speaker, as an organizer—his business gift not being the least of all.

In his day the Bureau, together with its Meat Inspection Service, became subject to the rulings of the Civil Service Act. Hence it came about that the various chiefs in divisions of the Bureau were appointed on known merit discovered in length of service, or by attainments discoverable by the Bureau in actual work for it by the man. There could hardly be any other expectation than that the system would have effect in the choice of Dr. Salmon's successor. It was reasonable to believe that the chiefship, if it was not subject to change with administration, as it had proven in the case of Dr. Salmon, would be filled by promotion from below instead of appointment from without. Apparently the career of Dr. Salmon—the chief being always before the public eye—had overshadowed the men at Washington who were his counsellors. Among these were Dr. A. D. Melvin, the Assistant Chief of the Bureau, Dr. Arthur Manly Farrington, Chief of the Inspection Division, and men concerned with scientific investigation, like Dr. Mohler, Chief of the Pathological Division. Drs. Melvin and Farrington had a large share in the administrative work of the Bureau and for twenty years, rising step by step from below, had come to have, with the growth of confidence in them, positions of power. All official authority emanated from the chief; but a large share of his official information and judgment had come from his assistants as counsellors. Secretary Wilson, knowing the law that a veterinarian could be the only one to succeed

Dr. Salmon, and having full confidence in his proven men, gave decision that Dr. Melvin should be made chief, and that the men from below should be moved up, Dr. Farrington becoming assistant chief. The effect upon the *morale* of the service of this decision is great. In future the appointments will be made under the guidance of the same policy. The Civil Service system prevailed. But if Mr. Wilson had not wished to decide for the system, there was other ground upon which to decide the contest. Dr. Melvin was found to have the confidence of the American Veterinary Medical Association. He had the confidence of the packing interests, who believed in his sanity and good sense. He had the confidence of all the officials of the Bureau and the Secretary of Agriculture himself. After gradual promotion during nineteen years of service, and being approved of all along the line, Dr. Melvin was found to be worthy of the highest office at present in the gift of the Government to a veterinarian. The practicality of the man and the system was demonstrated. A contest of such a nature will probably never occur again, at least not in our day.

But what shall we say of the candidates for the place other than Dr. Melvin? At the time when the resignation occurred it looked as if there was danger of the chiefship being lost to a veterinarian. The condition of affairs looked more precarious when Secretary Wilson thought it advisable to call for candidates from the American Veterinary Medical Association—but he had it steadfastly in mind that, in accordance with the law, a veterinarian should be appointed. The business ability of The American Veterinary Medical Association was at that time shown in the immediate activity of the Executive Committee. The idea which was firmly and fixedly in mind and which had governance in all action of the veterinary press, The American Veterinary Medical Association and the candidates, indeed of veterinarians throughout the land, was to save the responsible office of Chief of the Bureau of Animal Industry for a veterinarian. Human action is always governed by numerous motives. Nevertheless, no one can say but that the main motive

in the mind of each candidate was to seat a veterinarian in Dr. Salmon's chair. All honor to the men who sacrificed time and money for that end. All honor, then, to The American Veterinary Medical Association for such a worthy purpose.

The appointment of a veterinarian, in the person of Dr. Melvin, as Chief of the Bureau of Animal Industry, is a striking instance of the vindication of the practical scientist against the charge that such a man necessarily lacks business capacity. It is all the more striking in that Dr. Melvin, before appointment, was completely exonerated from the charge of inappreciation of the business interests of the great live stock trade which it is now his duty to foster in every way that his science will assist him; while at the same time we must remember that the live stock men of the West stoutly supported him in his candidature, thus giving the lie to the absurd idea that knowledge of science and knowledge of business are incompatible.

We may now pass from this specific instance of the vindication of the American veterinarian against the charge of inappreciation of great business interests, all the more pleasing to us in that it was a vindication before the tribunal of the greatest business interests with which we have to deal—the national live stock and agricultural businesses—and turn to a consideration of how the veterinarian has shown his instincts for the proper conducting of large affairs by the origin and development of system for the transaction of that business with which he has to deal.

1. *In the institution of organization for the increase of veterinary intelligence among graduate veterinarians and prospective veterinarians.*

The organizations of graduate veterinarians for their mutual benefit, particularly the propagation of professional intelligence, are: The American Veterinary Medical Association; the state, county and city associations. Of these, The American Veterinary Medical Association, which started forty-three years ago with a local meeting in New York, then continued with semi-

annual meetings in New York or Boston for many years, has since attained to a national rôle and has its tentacles in many states and even foreign countries. It has developed into its present proportions under wise leadership, and, professionally, has proven itself, as is instanced in candidature for Chiefship of the Bureau, to be in reality the national voice of the American veterinarians. Doubtless it tends to become more influential. Its mandate effects veterinary education; state law and the general intelligence of the profession is increased by it. In its turn it is looked to by organizations within a small circle—state, county and city associations. The purpose of these differs the one from the other. The members in them seek self-protection; they discuss professional problems; they exchange ideas. The organizations are virile in proportion to their membership and their needs. No doubt all of them profoundly influence professional sentiment. They should be able to awaken interest in the national association and be feeders of it. The gift for organization shown in the formation of all these associations, their success as organizations and in fulfillment of their purposes tends to disprove statements of business incapacity hurled against veterinarians.

The organizations of institutions of veterinary learning for the instruction of prospective professional men if they have not, in all cases, tallied with the needs of animal kind nor with the ideals of the scientific founders, have nevertheless been started to suit the necessity of the case. Dr. Robert Ostertag, the German pathologist, who recently paid us a visit and made a study of our educational and governmental institutions and wrote of us in a "Travel-Study" (Reise Studie), has made a classification of American veterinary schools which I here adopt with some modifications. They are: State veterinary colleges; institutions in process of organization as state colleges; institutions partly private and partly under state control; private schools.

First, the state schools are part of the regular state educational organization. They are four in number—Cornell, Penn-

sylvania, Iowa and Ohio State. Each originated in the brain of a clear-headed veterinarian and owes its organization and effectiveness to him, signally bespeaking business ability in the founders, while each college is carried on by the ardor and loyalty of themselves or their successors. In the state institutions the organization for the business of the increase of veterinary learning is strong, the influence of these colleges has ramification into every phase of life in the state connected with the science. Their perpetuation through state endowment is assured so long as they continue to put forth the fruits of scientific usefulness. Second, there are several institutions which may be said to be in process of organization as state colleges. These are Minnesota and perhaps California and Missouri. I would not be surprised to see regular state veterinary colleges at such, and perhaps other state universities in my day. In them, and in others, we find professors and assistants giving courses partly leading to a degree or counting towards a degree when the recipient goes to a regularly approved college. The tendency of such a nucleus through the organizing ability of the professors, is to grow into state veterinary colleges. Third, some organizations are partly private, in that they are largely dependant for existence on student fees, though they bear a direct relation to the state educational organization. Such an one is the New York-American College of New York City, which is under the supervision of the University of the State of New York, while at the same time it is part of the organization of the University of the City of New York. Fourth, there have been founded amongst us private schools which have received the strictures of Ostertag, as they have of others here in America. There are two in Chicago, two in Kansas City, one each in Grand Rapids, Indianapolis and San Francisco, etc. There have been diatribes enough on these institutions. What now can be said in their favor? Though they are very faulty, they are at least a tribute to the business capacity of men who saw a good field for educational exploitation and made use of it. The men who have founded them, in most cases, perhaps, have done what they

could under the circumstances to bring them to a higher state of usefulness. Is it not true that the Royal (Dick) College, Edinburgh, and New College, Edinburgh, were founded in much the same way? In most of the colleges also in every class one is apt to find that the students have organized societies of comparative medicine. Much embryonic business ability is shown in these associations. They give a man parliamentary practice and prepare him for his place in an association of graduates when he shall have found his place in the outer world.

2. *Organization for the furtherance of private interests—private practice and other enterprises where business capacity has been shown.*

Certainly in what is called private practice, and in other professional enterprises where the veterinarian works individually for his own private fortune, there is a large field for the display of business talent. Here is where veterinary learning, skill and business capacity, as they were defined in the first part of this paper, are so largely shown. The veterinarian in all forms of private professional enterprise has displayed the variety of his professional knowledge, the variety of his skill and an adaptability to the varying needs of localities. He has acquired property, obtained business standing in communities, been made an official in city affairs, written semi-technical books and acquired fortune; he has been, in a word, a man of affairs. He has been found to be thinking with the times and for the times. He has had that extraneous information knowledge of the world, which is an increment of success. His acuteness in business can be seen in almost every town, for in most towns there are propertied veterinarians. One has but to glance through veterinary periodical literature to see the variety of subjects touching the business with which his mind is engaged.

3. *Organization for the veterinary interests of the states as such.*

The influence of veterinarians to bring about the enactment of legislation in the separate states is remarkable. Through

his good offices law has been passed regulating veterinary practice. He has seen the law through. He has defined what the educational qualifications of practitioners should be, sat on examining boards, and laid down rules for certification, registration and prosecution. He has had law placed on the statute books for the prevention, control or extirpation of infectious or other communicable diseases among animals, hence the live stock sanitary boards and laboratories of the same. He has made it part of the law that infectious diseases should be investigated. He has administered the law as a state veterinarian; or, as a state officer receiving his pay from the national funds, that is as an experiment station veterinarian, has made investigations himself. He has made it his business to initiate, organize and conduct the professional affairs of his own state.

4. *Organization under federal statute for the veterinary interests of the nation.*

The greatest achievement of the veterinarian in the United States, he being delegated to conduct the scientific business of the Government relative to his profession, is the organization of that vast system the Bureau of Animal Industry. Whether one considers its origin, its beginnings, its extension, its accomplishments, its present scope, its future scope, its past leaders, its present leaders, in all he would be transfixed by the nobility of this scientific foundation, the noble-mindedness with which it has been conducted, the extraordinary business capacity which has marked its progress. If the wisdom of the law which founded it, whereby a veterinarian was made its chief, has not been verified in the past by virtue of its service to the Republic, the grand opportunity is given now. In the month of agitation which brought into existence the new Meat Inspection Law of June 30, 1906, in all the clamor, hardly a murmur from sane minds, could be heard against the meat inspection service of the Bureau of Animal Industry, for that service had been conducted in strict keeping with the power allowed by the law of 1891. The scurrilous articles that were written against the inspection drew attention rather to the limitations

of the law than to faultiness in the inspectors themselves. The people soon saw that the inspectors were not blamable for their inability to transcend their prerogatives. Just as it took only one month for the agitation to bring the new law, so by one month later, August 1, 1906, the men of this profession at Washington had formulated the new inspection regulations based on the law. With so much business despatch can veterinarians in the service of the nation meet the public needs.

As in the past, so now, the Bureau of Animal Industry is the best proof of the business capacity of the American veterinarian.

INTOLERANCE.—There is no intolerance so dangerous as that based on a little partial knowledge. The deeper one delves into matters scientific, the more humble he grows as to his own attainments, the more profoundly he is impressed and oppressed with the hugeness of the universe, the immensity of the knowable, and his own littleness, the narrowness of his limitations. A very wholesome sentiment it is, too. But the man whose cranial capacity is fully distended by the presence of a single thought, whose grasp of a single truth is so spasmodic that all else is forced out of his grasp, is the man who demands that all the world must square belief and practice by him and his; and condemns to the demnition bowwows all who disagree with him.—(*Am. Jour. of Clinical Medicine*, July, 1906.)

HALF CALF AND HALF LION.—A dead calf, with the head, body and general markings of a lion, and the soft hoof formation peculiar to cattle, is in the possession of John Koke, of 2121 North Nevada avenue, this city. The animal has just been received from a taxidermist, who stuffed it. The freak was born on a ranch owned by George Cross, near Silver Cliff, in the Wet Mountain cattle country. The mother, after staying with its calf two days, became frightened and ran away. The deserted "cub" calf was then taken care of by the ranchmen for some time, but was finally found dead in its stall. The head is nearly identical with that of a half-grown mountain lion, while the mouth, contrary to the characteristics of cattle, has two sharp fangs on each side of the upper jaw. Its body is long and sinewy. The hair is a pale brown, and the legs short and stocky, although the feet are of soft hoof formation, and cloven. (*Colorado Springs Correspondence Denver Republican*, Aug. 9.)

THE EFFECT OF CHLOROFORM ON THE RESPIRATORY TRACT OF THE HORSE.

BY NEWELL D. BACKUS AND PERCY J. AXTELL.

Thesis presented to the Faculty of the New York State Veterinary College, Cornell University, for the Degree of Doctor of Veterinary Medicine, 1905.

The reason for research on this subject, and the desire to proceed with the same, was brought to our attention by the facts that in modern surgery of our domestic animals we are compelled to use an anæsthetic, for humanity's sake, for the insurance of asepsis, for the convenience of the operator and the safety of the animal. We are confronted in many cases by fatal results after the administration of chloroform, which fatality is thought to be caused by the drug, directly or indirectly. It is our aim to determine what the effects of chloroform may be on the respiratory tract of the horse, when administered for surgical operations, and to determine, if possible, the precautions which may reduce the dangers to a minimum.

Before proceeding, it may be of interest to learn something of the history of chloroform and of some of the other anæsthetics, and the way they act.

Ether was used for general anæsthetic purposes previous to chloroform and the first operation under ether was performed Oct. 14, 1846, by Warren, of the Faculty of Medicine, at Boston. Boats and Lister first employed ether in England during 1847. Simpson drew attention to the anæsthetic properties of chloroform, which he declared superior to its predecessors, in 1848. Chloroform soon displaced ether, maintaining its supremacy in human surgery until a recent date. In animals, save perhaps the dog and the cat, it is still the anæsthetic preferred.

In general anæsthesia, the patient is thrown into a more or less profound sleep. It is not always necessary to act on the entire individual, however; sometimes the operation affects only a very limited area, and local anæsthesia suffices.

As generally considered, anæsthetics have a less extended usefulness in animals than in man. Pain should be spared as

far as possible, but there are several things to be considered. The expense is no small item, and there are morbid conditions in which it is contra-indicated :

(1.) Diseases of the heart* :

(a.) Lesions of the valves or myocardium.

(b.) Dilatation and hypertrophy.

(2.) Diseases of the respiratory tract :

(a.) Emphysema, pneumonia, chronic pleurisy, etc.

Our clinical records contradict these statements ; all these have been anæsthetized with good success, except pneumonia, in which it proved fatal.

There are many operations which can be performed with comparative safety which would be rendered absolutely impossible without general anæsthesia, as in the reduction of hernia, delivery in case of dystokia, laparotomy, and, in fact, all cases where one works in dangerous proximity to important organs.

General narcosis being the result of a special action exerted directly on the nerve centres by the anæsthetic agent, the first necessity is to insure a sufficient quantity of the anæsthetic arriving at these centres. The best known method for volatile anæsthetics to be conveyed to these centres is by penetrating the respiratory mucous membrane. Volatile anæsthetics, administered into the tissues direct, escape to a large extent through the walls of the pulmonary vessels, are expired, and fail to reach the nerve centres in sufficient quantities to produce the desired effect. On the other hand, volatile substances, introduced in a state of vapor into the respiratory tract, are freely absorbed by the circulating blood in the lungs. This blood passes to the left heart and general arterial system, including the nerve centres, rapidly producing anæsthesia.

Anæsthetics administered via the respiratory tract produce a series of phenomena :

(1.) Period of excitement.

(2.) Period of anæsthesia, or surgical period.

(3.) Period of collapse.

* Dollar.

The period of excitement is supposed to be due to the action of the anæsthetic vapor on the nerve terminations in the mucous membrane of the upper respiratory tract and the paralysis of the cerebral inhibitory centres and later due to the action on the greater centres. This is characterized by perverted sensation, excitement and hyperæsthesia, of the sense organs. During this period, in animals predisposed to such complications, anæsthesia may produce respiratory, or cardiac, syncope.

Reaching the second or surgical period, which is characterized by suspension of activity in the nerve centres, the animal is in a profound, artificial sleep, the muscles relaxed, respiration slow, movements of the chest walls are diminished, but those of the abdomen and flank are slightly increased, and as sensation is lost in the various regions reflexes cease. Sensation does not simultaneously disappear in all regions; the limbs and the trunk are the first to be affected, then the organs of sense.

Histology of the Respiratory Tract.—The mucous membrane of the larynx and pharynx are the same, having a covering of epithelium, a tunica propria, and among the epithelial cells of the trachea are found many goblet cells. The epithelium, covering the free margins of the epiglottis and parts of the larynx, as far as the false vocal cords, is stratified squamous in character. At the lower edge of the false vocal membrane, the epithelium becomes stratified, ciliated columnar, which is retained throughout the ventricle of the larynx. Over the true vocal cords, the epithelium once more becomes squamous stratified, beyond which point the stratified, ciliated columnar character is resumed and retained throughout the trachea and bronchi. Numerous taste buds, identical in structure with those on the tongue, lie embedded in the posterior surface of the epiglottis.

Theory of Ciliary Movement.—The number of cilia attached to a single cell, varies from one to two dozen, their length varying widely, those of the epididymus being about ten times longer than those of the trachea. The number of vi-

brations of the respiratory cilia average about ten per second with rapid primary and a much slower secondary movement to the original position.

Conclusion.—The cilia morphologically are direct outgrowths of the protoplasm of the cell and since this is inclosed in each case by a pellicle, it must also invest the outgrowing process and form the delicate wall of the tube filled by cell plasm. The tube thus formed may be cylindrical or flattened, and as they work in only one plane, we would expect that they were flattened as their minute size hinders us from ascertaining their exact shape.

The investing pellicle or cuticle in most cases has undergone differentiation in such a way as to cause movement of the cilium to be executed in a definite direction, but before this differentiation is complete, we should expect the protoplasmic outgrowth to retain many of the functional manifestations of undifferentiated cell protoplasm. The most feasible of these would seem to be from the changes produced at the surface of the cell.

There can be no reasonable doubt but that variations in the tension of the superficial layer must be due to the local chemical changes caused by agencies acting either from within spontaneously or from without as stimuli.

These cilia are attached to various forms of epithelium in the lower animals, in man and higher animals they are limited to the columnar form.

The following experimental and clinical observations are submitted, illustrating the influence of chloroform anæsthesia upon the action of the cilia and the functions of other parts of the respiratory tract.

Case No. 1.—This animal was a worn-out horse which was used for surgical exercises. The chloroform was administered by our method, which is described in our conclusion of this article.

This animal died on the operating table after being under the influence of chloroform for about two hours. The nose

was not depressed and there was an excessive amount of mucous discharge (about one litre), from the nostrils upon depressing of the head after the removal from the table. Prior to death, the blood from the wounds was black.

Microscopical examinations were made of the cilia of the trachea and bronchi with special apparatus devised for the work.

This examination was made about four hours after death, and some ciliary action was found to be present. By placing a drop of chloroform so the vapor would come in contact with the specimen, the action of the cilia diminished rapidly and stopped, and it was impossible to revive the action.

Bacteriological examination was made by taking bouillon and agar cultures from the trachea, bronchi, and lung tissue and nasal mucous discharge. Bouillon cultures from the trachea after three days, were cloudy, acid in reaction; the organisms were non-motile rods and some micrococci. The agar culture examined at the same time, showed a raised, glistening growth.

The bouillon cultures from the mucus of the nose had a peculiar odor which could be compared to the odor of the breath of an animal suffering from inhalation pneumonia.

Case No. 2.—This animal was like that in Case No. 1. This case was very hard to keep under the influence of chloroform, presumably due to the action of some drug given previous to the administration of the chloroform. The animal was under the influence of the anæsthetic for about four hours, but for no definite period did we have good surgical anæsthesia. At the termination of this period, the animal was killed by bleeding from the carotid. Post-mortem examination showed the small bronchioles and bronchi nearly filled with a frothy mucus and the air sacs were also partially filled. Observations on the ciliary movement and a microscopical examination of the trachea and bronchi, gave the same results as in Case No. 1. Bacteriological examination showed the agar slant, with ground glass appearance and raised growth, and bouillon cultures revealed nearly all genera of bacteria.

Case No. 3.—This animal was similar to that in Case No. 1. The animal was in apparent health and was destroyed instantly by shooting in the head for the purpose of ascertaining the normal condition of the respiratory tract. This animal had had ordinary treatment in regard to care and feeding, and after the shot was fired did not take an inspiration. Careful post-mortem examination was made with the following results: Macroscopical examination showed the entire respiratory tract to be in a perfectly normal condition. The examination failed to reveal any foreign material below the larynx. Examinations of the cilia, at various parts of the trachea, and repeated at short intervals for six hours after death, showed that the ciliary movements were checked after that length of time, probably due to the absence of moisture.

Chloroform vapor brought in contact with the cilia at any time during this period stopped the action almost immediately.

In the bacteriological examination, bouillon and agar cultures were taken from the post nares, and from the trachea just below the larynx, at the bifurcation of the trachea from some of the smaller bronchi and from the lung tissue. All proved to be sterile except the one from the post nares. This showed several genera of bacteria, which were not identified.

Case No. 4.—This animal was in the same condition as that in Case No. 1. The horse was placed upon the operating table and the nose was depressed. Chloroform was administered and the animal was kept under deep anæsthesia for a period of about three hours. He was then destroyed by carotid bleeding. Upon his removal from the table, a profuse discharge of mucus came from the nostrils. Post-mortem examination showed an excessive amount of frothy mucus in the bronchi extending to the smallest bronchioles and the alveolæ of the lungs. Examination of the cilia was made two hours after death and at varying intervals for eight hours thereafter. Their action then ceased. Probably the absence of moisture played a major part in causing the death of the cilia.

During the bacteriological examination, bouillon and agar

cultures were taken from the trachea, bronchi and lung tissue, also from the mucous discharge. The bouillon cultures, after three days, showed cloudy growth, acid in reaction and foetid odor. Agar cultures gave a vigorous, raised growth. In this case, some of the mucus was collected in a sterile test tube and allowed to remain at ordinary room temperature for a period of thirty days and there was no visible change in appearance. Cultures were taken after the lapse of this period and we obtained the same results as on previous occasions. The microscopical examination of these cultures showed a motile rod, micrococci, and nearly all genera.

Case No. 5.—This animal was in the same condition as that in Case No. 1. The animal was an anatomy subject and tracheotomy was performed about ten inches below the larynx, no chloroform having been administered. The object of this experiment was to ascertain the length of time which the ciliary action would continue, if kept in a moist chamber and without the previous effects of chloroform. A portion of the trachea was removed, including the lining ciliary epithelium and placed in a watch glass which was then placed in a dish containing some water. With a hand lens, careful examination was made for foreign particles on the surface, but none could be seen. Neither was the ciliary movement noticeable. Small sections of this lining ciliary epithelium were examined in a special chamber under a compound microscope; this apparatus being so arranged that a current of moist air or moist chloroform vapor could be alternated and brought into contact with the active cells. The cilia were very active and by passing the moist chloroform vapor over them, the action was gradually but continually checked, it requiring about one and one-half minutes to completely check their action. Moist air was then passed over the same cells and brought in contact with the same. The object was to revive their action, if possible; but failed to do so. This experiment was tried several times, and when once checked by chloroform vapor, it was impossible to revive their action. In this case, the action of the cilia was

watched at varying periods for twenty-seven hours after removal from the animal and motion was still present. Bacteriological examinations of the trachea at this point were negative.

Case No. 6.—Was in excellent condition, but was destroyed because of incurable lameness. The animal was secured on the operating table and was placed under deep surgical anæsthesia. After chloroform had been administered for about thirty minutes, a piece of the trachea was taken to the laboratory and examined for ciliary movement. No action was present. After the animal had been under the effect of the anæsthesia for about one and one-half hours, another piece was taken; with the same result. These preparations were kept in a moist chamber for six hours and examined at various intervals, but the action did not resume. The animal was killed by carotid bleeding after about three hours and post-mortem examination showed no ciliary action. The lungs, bronchi and trachea were practically the same as in the other cases, both microscopically and bacteriologically.

Case No. 7.—This animal was chloroformed by use of a nose bag. About six ounces of chloroform were required to place the animal in profound anæsthesia, although it was accomplished in about three and one-half to four minutes and required about three ounces more to keep the animal under for fifteen minutes, when the nose bag was replaced by a piece of cheesecloth and the animal was kept under the influence of the anæsthesia for about three hours, in the usual way. Post-mortem examination showed more mucus in the bronchi and alveoli of the lungs, and bacteriological examination showed the same results as on the previous cases.

Case No. 8.—This animal was about twenty years old, in fair condition, and had been cared for and fed in the usual way, no preparation in this respect having been made for the administration of the chloroform. She was cast in a box stall. With the aid of the chloroform bag, as used in Case No. 7, she was placed under deep anæsthesia in about four minutes and kept

in this state for about thirty minutes. The amount of chloroform required to accomplish this was five ounces. The casting harness was removed as soon as anæsthesia was acquired and at the end of thirty minutes the chloroform bag was also removed. We then raised a dust and scattered chaff and horse manure about in the stall, no precaution being taken in regard to position of the head. The animal was then left alone to revive, but was carefully watched. In twenty minutes, she was sufficiently revived to raise up on her sternum, with nose pendant, and there was a considerable discharge of mucus from the nostrils. In forty minutes, she arose to her feet without any assistance and appeared to be in very good condition. At the end of fifty minutes, she was eating some hay which had been left in the stall and was able to swallow without any difficulty. Her temperature was taken at various intervals for three days afterwards and it did not rise above 101° Fahrenheit, at any time. Eleven days later she was placed upon the table and chloroformed and kept under the influence for three hours. After she had been under the influence for thirty minutes, and one and one-half hours, respectively, pieces of the trachea were removed and examinations made to ascertain the movements of the cilia; none were found.

Post-mortem examination was made two hours after the time of the killing of the animal by bleeding, and no ciliary action was found. Respiratory tract was found to be in a normal condition, except for the presence of an excessive amount of mucus. Bacteriological examinations gave the same results as in previous cases after chloroforming.

In the larynx, just back of the arytenoid cartilage and vocal cords, was found a collection of food material, which undoubtedly came from the mouth, as that cavity was found to be partly filled with imperfectly masticated food at the time of administering the anæsthetic. Bacteriological examination of the mucus on each occasion was identical, there being a cloudy growth in bouillon with fœtid odor and a raised growth of agar slant.

CLINICAL DATA.

The following table of equine patients undergoing chloroform anæsthesia at the New York State Veterinary College, Cornell University, gives some idea of the mortality due to chloroform anæsthesia, with causes of death :

Time.	Total No.	Recoveries.	Deaths.	Causes of Death.
15-45 minutes . .	71	70	1	Chloroform pneumonia.
$\frac{3}{4}$ -1½ hours . .	53	49	3	Chloroform pneumonia.
1½ hours and upwards	11	8	3	Chloroform pneumonia.
Total . . .	135	127	7	

Two experimental animals died from the effects of impure chloroform.

It has been shown that chloroform vapor stops the action of the cilia along the respiratory tract and also stimulates an excessive secretion of mucus, which can flow into the lungs without any hindrance when the cilia are inactive and the sensation paralyzed so that no coughing occurs. This mucus may come from the post nares, which we have shown to have an abundant supply of bacteria. These bacteria being conveyed to the lungs in this mucus, we have all the requirements for rapid and progressive growth of these organisms, as the lungs at body temperature act as an incubator, and, as is well known, body temperature is favorable for the multiplication of them.

As a horse very often breathes through the mouth when anæsthetized, our Case No. 8 suggests that it is quite an essential feature to have the mouth empty, which will tend to prevent inhalation of any foreign materials from this source. It is well to have the stomach empty, or nearly so, as this will guard against any food being regurgitated into the mouth from this organ. Our clinical records show two instances in which food was regurgitated into the mouth from the stomach while the horse was in a state of profound anæsthesia.

As we have mentioned the increase of mucous secretion in the nasal cavities, post nares and trachea, it is well to guard against this passing into the lungs by depressing the head and

keeping the nose bent downward. This is accomplished best by having a depressed headpiece on the operating table. The discharge of mucus is also aided by our method of administering chloroform for anæsthetic purposes, which is as follows:

Plug the lower nostril with a ball of absorbent cotton.

Put a piece of cheesecloth over the nose, covering both nostrils.

With a chloroform bottle, or any other container, with a cork so fixed as to allow the chloroform to escape in drops, cause it to drop on the cheesecloth over the upper nostril, at each expiration, so that the current of expired air will break up the drug and prevent liquid drops from entering the nostril:

We claim the following advantages:

1. Easily adjusted.
2. By keeping the head depressed, the mucus is allowed to escape from the upper nostril and is absorbed on the cotton from the lower one.
3. The rate of administration can be varied instantly.
4. We have been able to acquire surgical anæsthesia and to maintain it for a greater length of time at a much less expense.
5. It is administered through a tracheal wound by the use of a funnel and cheesecloth just as readily as through the nostril and thereby becomes available in case of operations about the head and larynx.

"EACH COPY OF THE REVIEW is worth the amount of a year's subscription. I would not wish to be without it."—(*J. A. Dresback, V. S., Mayor of the City of Stanberry, Missouri.*)

A POWERFUL SALVE.—A man in Nebraska has invented a new powerful double-acting salve, which shows powers never before exhibited by salves of any kind. The inventor accidentally cut off the tail of a *tame* wolf, and, immediately applying some of the salve to the stump, a new tail grew out. Then picking up the old tail, he applied some of the salve to the raw end of that, and a wolf grew out; but he was a *wild* wolf and had to be shot.—(*Chicago Tribune.*)

THE PROGRESS OF THE VETERINARIAN IN THE PHILIPPINE ISLANDS.

BY DAVID G. MOBERLY, D. V. S., CHIEF VETERINARIAN, AND
ROBERT H. McMULLEN, D. V. S., VETERINARIAN BUREAU OF
AGRICULTURE, MANILA, P. I.

In April, 1904, a Veterinary Corps was organized by the United States Philippine Commission, as a division of the Board of Health. The division consisted of thirteen veterinarians, twenty inoculators, and three native meat inspectors.

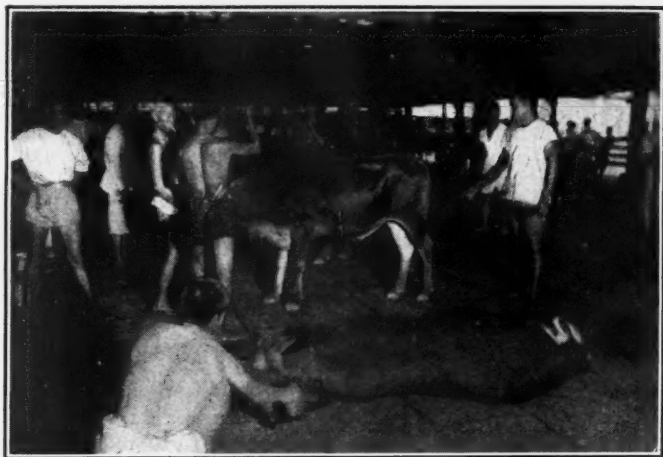
At the time of the organization of the corps, rinderpest was prevalent in thirty of the forty provinces of the Archipelago. Since the first outbreak of this disease, subsequent to American occupation, and which occurred in 1899, the mortality reached about sixty per cent. of the total number of bovines in the Islands and this condition practically paralyzed the agricultural interests, as carabao and cattle exclusively are used in tilling the soil.

Surra was introduced in the summer of 1901, supposedly by a shipment of horses from China. This disease spread rapidly throughout the Islands, attacking horses, carabao and cattle. About sixty-five per cent. of the total number of equines were affected during the first eighteen months of the outbreak, and the mortality among these was 100 per cent.

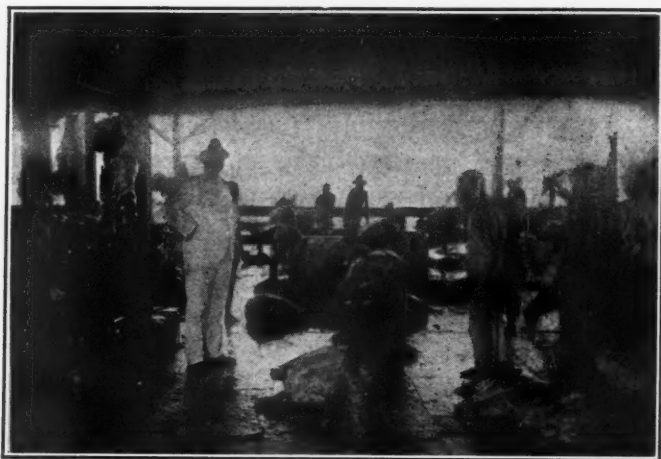
According to Spanish reports, glanders (called *Muermo* by them) has existed here for a century or more, and at the time of the arrival of the Americans, it is safe to state that it was present in every hamlet.

Epizootic lymphangitis, known by the Spaniards as *Lamparones*, was also widespread and it attacked many of the equines which had escaped the ravages of surra and glanders.

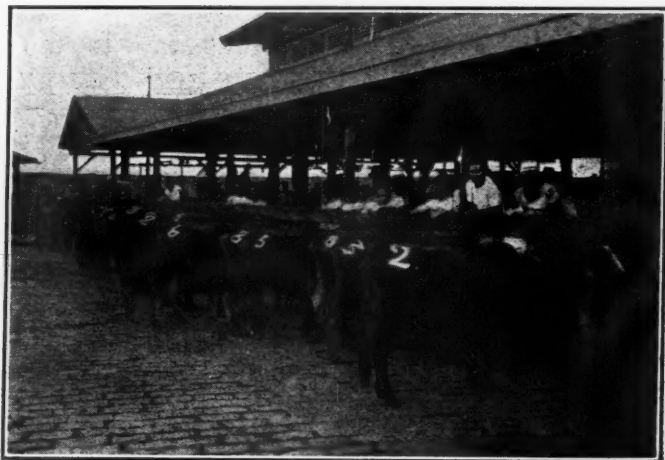
Foot-and-mouth disease was general throughout the provincial districts. All Philippine cattle carry the Texas fever tick, *Boophilus australis*. Hæmorrhagic septicæmia had been encountered in Manila and in a few of the provinces. Anthrax prevailed in northern Luzon, having been discovered by Dr.



FILIPINOS KILLING CATTLE BY PITHING



CHINESE KILLING HOGS BY STABBING



A LINE OF CONDEMNED CATTLE.



INSPECTING HOGS FOR *CYSTICERCUS CELLULOSA* (NOTE THE CYSTS).



CONDEMNED FOR *CYSTICERCUS CELLULOSA*. (HOG HANGING BY HIND LEGS.)



SCALDING VATS.

McMullen in 1904. One distinct outbreak of dermatitis gangrenosa contagiosa occurred among the draft horses in Manila in 1904. Hog cholera and chicken cholera had claimed many victims.

A perusal of the above conditions which confronted us at the time of our organization must convince one that the lot of the Philippine veterinarian was indeed not a happy one.

Serum therapy and quarantine regulations are employed in combating rinderpest. The serum is prepared at the Serum Institute, a branch of the Bureau of Science. The methods adopted in inoculating are the simultaneous, the deferred and the use of serum only.

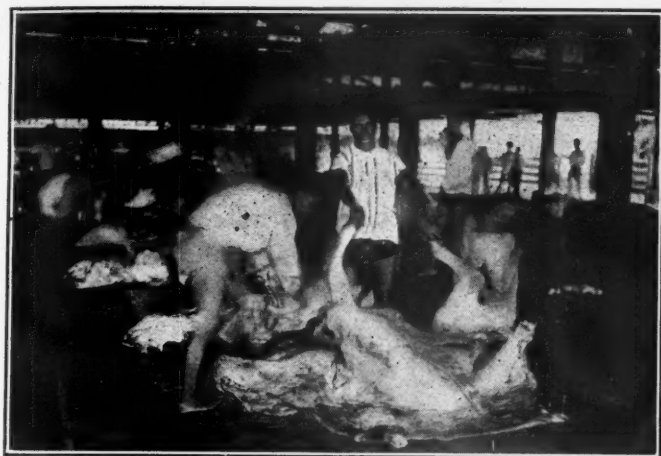
Serum alone is only used as a temporary prophylactic and curative agent, and among herds actually infected. The dose as a preventive is 50 c.c. hypodermatically and as a curative 300 to 400 c.c. in doses of 50 to 100 c.c. daily.

The deferred method is employed in herds exposed, and before the period of incubation has elapsed. This method consists of injecting 50 to 100 c.c. of serum, followed by 1 c.c. of virulent blood ten days after the serum injection, provided no cases develop during the time intervening. If, however, rinderpest exhibits itself, more serum is given and the use of the virulent blood postponed for another ten days.

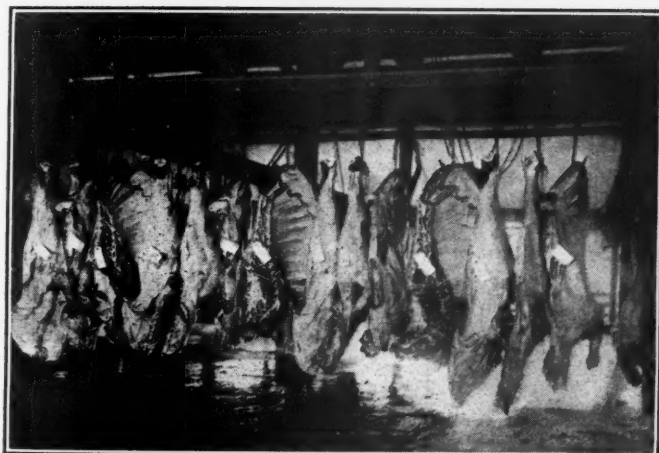
The simultaneous method consists of injecting 30 c.c. of serum on one side of the animal and 1 c.c. of virulent blood on the other, and it is applied to animals in non-infected communities which are brought into communication with infected herds.

By the adoption of the above-mentioned methods, we have succeeded in stamping out rinderpest from the entire Archipelago, with the exception of the Islands of Panay, Southern Negros Bohol, Northern Mindanao and the southern extremity of Luzon, in which districts the disease is being held in check. It will be remembered that the Archipelago includes over 1,000 islands in the group.

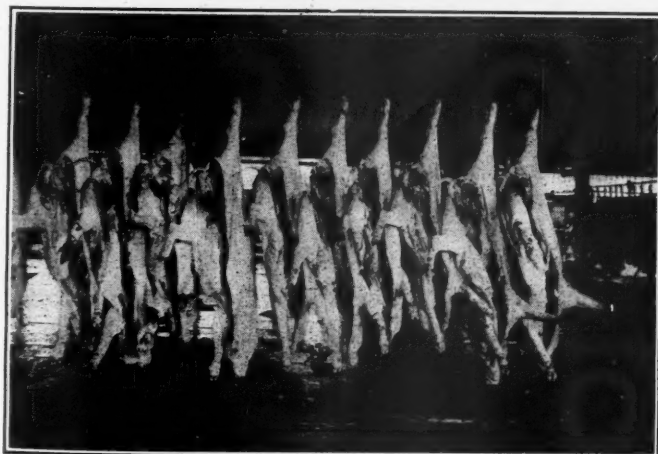
Surra is incurable in the horse and mule. Cattle and cara-



DRESSING CATTLE



BEEF INSPECTED AND DRESSED.



PORK INSPECTED AND DRESSED.

bao have been known to harbor the parasite for many months without any apparent harmful effect. The mortality among cattle and earabao has not exceeded five per cent. When it is considered with what difficulty healthy equines are prevented from coming in contact with infected bovines, it will readily be realized what a knotty problem presents itself. The infection of surra is also carried by flies.

Animals with glanders are promptly destroyed.

Epizootic lymphangitis is amenable to treatment. In Manila the use of animals thus infected is prohibited.

As previously mentioned, all Philippine cattle are carriers of the Texas fever tick ; thus Texas fever is of importance only to importers of cattle from non-infected countries.

The Bureau of Science is now installed in its new building, erected and equipped at a cost of a quarter of a million dollars. Much research work is being done in this bureau. A stock of anti-rinderpest and anti-tetanic serum, also mallein, are always on hand.

We point with much pride to our public abattoir in Manila, which from a sanitary standpoint is unexcelled by any other similar institution in America or Europe. Daily killings at the abattoir are about 150 hogs and 75 cattle.

It is a large structure supported by massive pillars and without walls. It has a stone floor throughout, which is well drained and sewerred. It is electric lighted, and, being without walls, is perfectly ventilated. The floor of the adjoining corral is also of stone, and the entire premises, which are operated under the supervision of an experienced American, are kept in an absolutely perfect sanitary condition, and are thoroughly washed and disinfected daily.

Every employé of the abattoir who has to do with the killing of animals or the dressing of carcasses is required to "line up" immediately before the daily slaughter, and his clothing, hands, arms, and limbs are inspected. If his much abbreviated wearing apparel is dirty, or if there be sores or filth on his body, he is ejected from the premises.

Condemned carcasses and parts of carcasses are sent to and disposed of at the crematory, and the superintendent of that institution gives receipt for them. This receipt must tally with the inspector's report.

Cattle are killed by pithing performed by expert Filipinos and hogs are slaughtered by stabbing done by Chinese.

A veterinarian, assisted by a qualified native, is detailed to make ante-mortem and post-mortem inspections. The diseases for which animals have been condemned at the abattoir are: rinderpest, tuberculosis, Texas fever, hæmorrhagic septicæmia, hog cholera and cysticercus cullulosa. The *Fasciola hepaticum* is invariably found in large numbers in cattle imported from China.

Upwards of 3,000 cattle are imported monthly from China, Indo-China, Straits Settlements, Borneo and Australia. A rigid system of port inspection is maintained directly under the supervision of the Chief Veterinarian.

The Veterinary Corps was transferred from the Board of Health to the Bureau of Agriculture, as a part of the Division of Animal Industry, in September, 1905.

The writers of this article have made no attempt at this time to dwell upon scientific details; but rather by presenting this brief outline, hope to enlist the attention of our fellow veterinarians in the Homeland to conditions presented in our far-away Insular possessions.

A CANINE CEMETERY.—Wooster, Ohio, it is claimed, has the only regularly laid out and platted cemetery for the exclusive burial of dogs in the world, and likewise has the first official dog funeral director. The City Council recently bought a plot of ground and appointed Andrew O'Brien sexton to look after the interment of all dead bowwows claimed or unclaimed. O'Brien has gone ahead and laid out the cemetery. In his announcement Mr. O'Brien states that there will be no Sunday funerals, nor flowers permitted at any time. Schedule of prices, which includes digging of grave and lot, small dog or pup, 50 cents; good sized dog, 75 cents; a dog that has been a good while dead, \$1; a dog that has been dead so long that lime and embalming fluid is necessary, \$1.25.

HYPODERMIC AND INTRAVENOUS MEDICATION.

By N. I. STRINGER, D. V. S., PAXTON, ILL.

Read before the Illinois State Veterinary Medical Association, July 12, 1906.

I have not chosen this subject in order that I might reveal any startling revelations, but more that we may all gain much valuable knowledge from the discussion that I hope will follow.

First, I wish to make a few quotations from Bourneville and Bricon's "Manual of Hypodermic Medication," by G. Archie Stockwell, M. D., F. Z. S. : "The introduction of a needle into the body as a therapeutic measure has been in vogue for centuries in the Orient, and was introduced into Great Britain and Europe in 1670, though it met with little favor until 1810, when Berloz revamped the procedure. Intravenous injections generally obtained in the seventeenth century, but whether a hollow needle bearing medicaments was ever employed for medical purposes is questionable. Endermic medication, however, was taught by Lambert. For the strictly hypodermic method, however, aside from the physiological experiments of Magendie and others, we are indebted to Doctor Alexander Wood, of Edinburgh, Scotland, who employed morphia solutions subcutaneously for the relief of neuralgia as far back as 1843, though such procedure attracted little attention until about 1855."

Since 1855-56 the hypodermic system has steadily grown to the rank that it now holds.

I need not describe how to use the hypodermic method more than to state that proper sterilizing of the syringe, needle, point of injection, etc., is necessary to success.

A short article by Dr. Middleton, A. B., D. V. S., Philadelphia, Pa., in the AMERICAN VETERINARY REVIEW, Vol. XV., page 391, describes the hypodermic uses of the following named drugs: æther, amyl nitris, antipyrin, apomorphine hydrochloric, atropin sulphate, camphor, morphine hydrochloricum, pilocarpine hydrochloric, pilocarpine-eserine, ergot, strychnine sulphate, thallium sulphuricum, veratrum. I have used some

of the above-named drugs hypodermically with varying degrees of success.

When we place a drug into the living body in a manner that will insure its absorption we can usually expect to get its physiological effect whether or not we have made a proper diagnosis and obtain a proper or improper result.

Much more caution should be exercised in using drugs hypodermically than orally or otherwise. A knowledge of the physiological action of the drug used should be well understood.

"The physiological activity of nearly all drugs, more especially narcotics and those that possess direct action upon the nerve centres, is from three to five times more active when administered hypodermically than when given by the mouth."

The solution should be as nearly neutral as possible. Drugs in suspension should not be used.

The following are a few of the drugs that may be and are used in veterinary practice :

Aconitine.—Used with caution. I have seen very alarming symptoms from 1/20 grain, such as shivering, pupillary dilation, sweating, extreme salivation, nausea, effort to vomit, convulsions, muscular twitchings, motor incoördination, muscular paralysis, etc.

Alcohol may be injected with safety as a stimulant.

Amyl Nitrate a powerful sedative and antispasmodic. It lowers temperature by ozoning the blood, thereby checking oxidation, and relaxes the arterial system, greatly reducing arterial pressure. Said to be good in tetanus in one-half to one drachm doses. I used it in one case and believe I obtained good results. It should be freshly made, which is almost out of the question for the country doctor to get it just when he needs it.

Aqua pura sometimes serves for local anæsthesia.

Agenti Nitras, in solution (20 to 40 grains to the ounce of distilled aqua), 10 to 20 minims in several places over an atrophied muscle.

Atropine, 1/4 to 1 grain. It is said that very little atropine is to be found on the market, the drug being sold as such being hyoscyamine.

Chloral Hydrate will often leave abscesses and sloughs.

Quinine will often leave indurations, also abscesses and sloughs.

Cocaine, for local anæsthesia, abscesses from its use sometimes occur, possibly due to infection from the needle or a decomposed solution; unless used as soon as prepared phenol or boracic acid should be added to it.

Stovaine is better.

Digitalin, used in all cases where *digitalis* is indicated. Much swelling and dangerous abscesses usually occur from its use. I would advise leaving it out of the list of drugs to be used hypodermically.

Ergot, fluid extract, one-half to one drachm (P. D. & Co.'s), injected deep into a muscle. Sometimes get considerable induration for several days.

Nitro-Glycerine (1 per cent. sol.), a powerful stimulant, 10 to 30 minims.

It is not worth while to take more time to mention many more drugs that you are all familiar with.

I wish to say a little about intravenous medication, and I trust I may gain valuable information from the experience of some of you whom I know have given this method a thorough trial. I do not wish to advertise or condemn any proprietary remedy, but I shall have to mention two or three.

Tallianine.—I have to say that this season's work has caused me to lose faith in the remedy as being better than ordinary oral medication. I think that with what little experience I have had, *Nuclein* solution will do all that *Tallianine* will do.

P. D. & Co.'s Influenza Antitoxin, I failed to get any good results from. Others tell me that they think they have. It has been used but very little by the profession, and it is too early yet to give it its proper place.

Dr. G. Ed Leach is my authority in stating that 2 ounces of

a 2 per cent. sol. of *Oxychlorine* intravenously will relieve tetanus. I have not tried it.

Barium Chloride.—I used to be a true friend of the drug, but something happened to two or three of my cases a few years ago to cause me to drop it like a hot brick. Fatal results will sometimes occur from seven grains intravenously.

Normal Salt Solution.—I would advise its use in all cases of excessive hæmorrhage. I have injected three quarts into the jugular, and received the desired result. I have not tried it yet in azoturia, although I have tried about every other highly recommended treatment. But from a theoretical standpoint, it looks to me that the abstraction of about a gallon of blood, and the amount replaced by normal salt solution, would be good treatment.

Collargolum, 2 per cent. solution, dose 2 to 3 ounces intravenously. Indicated in all septic cases. I have just given it a trial in a case of morbus maculosus, but not a fair test. In the first place, the case looked to be a hopeless one. The case had been one of three or four days' standing when I first saw it. Tallianine first day and collargolum, 80 grains, divided between the succeeding five days. Colic complication developed after the third day's treatment. This complication invariably means a fatal termination, for it shows that the digestive organs will not supply the proper constituents of the blood, and the battle ground of this disease seems to be in the blood.

This paper has been written at random, but if I should attempt to enumerate all the drugs, their actions and uses, there would be no time for the other papers.

But I wish to say that I am of the firm belief that eventually septic and infectious diseases will be successfully combated by antiseptics and antitoxins through the hypodermic syringe.

THE OHIO VALLEY VETERINARY MEDICAL ASSOCIATION held a meeting at Vincennes, Indiana, on 26th ult. The officers are Dr. J. R. Mitchell, President; Dr. J. W. Moses, Secretary, and Dr. James Campbell, Treasurer.

REPORTS OF CASES.

"Careful observation makes a skillful practitioner, but his skill dies with him. By recording his observations, he adds to the knowledge of his profession, and assists by his facts in building up the solid edifice of pathological science."

OSTEOMYELITIS IN A DOG.

By W. REID BLAIR, D. V. S., Veterinarian and Pathologist N. Y. Zoölogical Park.

This rather unusual disease affecting the dog has recently been brought to my attention, and, owing to its somewhat obscure nature, I have considered it worthy of special notice. The following clinical history of the case has been furnished by Dr. Frank H. Miller, whose case it was.

Jan. 17th was called by Mr. Whitehead, 29 E. 74th Street, City, to examine a six-year-old male English setter that had gone lame. Mr. W. said dog had been suffering more or less from lameness in left front leg, but for the past two days was extremely lame in hind leg of same side. When seen by me he was lying on a comfortable bed, and made efforts to greet me, and arise, which he did with great difficulty, holding the left hind leg stiff. When caused to walk, he showed to be lame both in the hind and fore leg of the left side, mainly in hind, however. Movement was painful and hobbling in character and increased the respirations (pain breathing). Upon examination for rheumatism, especially rheumatic joints, which I fully expected to find as the cause of most of the trouble, I found to my great surprise that the stifle joint as a joint was apparently normal. It was flexed and extended without evidences of pain. Same applied to manipulations of the humero-radial and scapulo-humeral joints. Great pain, with howling, was evinced when the shaft of the femur, and to a lesser extent the tibia of the side in question were palpated or compressed. I could not convince myself that enlargement of the bones was present; but the more particular examination led me to believe the pain was due to a deep-seated bone condition rather than to an acute periostitis.

This held true for the closer examination of the radius and humerus of the same side. I could not find that the bones of the other side were involved from such manipulation. Temperature was but slightly elevated and appetite was modified owing to the pain.

I learned from the owner, that early in life some slight accident occurred to the dog's head, which he thought had accounted for a tendency to prolapse of the lower eye-lid, and slight ptosis of superior lid of the right eye.

Treatment.—Ordered $\frac{1}{4}$ grain morphine sulphate three times daily, by mouth, to allay pain. Hot cloths, the rubbing of the parts with a stimulating liniment, the active element of which was oil of wintergreen, three times daily. He was also given internally elixir pepsin and bismuth and syrup hypophosphites comp.

My opinion was that it was the initial stages of rarefying osteitis, but the unilateral aspect troubled me. Prognosis bad.

Jan. 21st: Visited case and found the patient taking more food and nothing the worse, food being retained.

Jan. 24th: Case most decidedly improved, especially in ability to get around, and soreness of the bones much less, even with less morphine being given. Began to feel hopeful that a recovery would be scored.

Feb. 2d: Again called, as dog was rapidly growing worse. Found him losing ground rapidly. More pain in limbs on pressure. More difficulty in raising himself and great difficulty in walking. Other limbs, while not decidedly painful to the touch, were weak and tottering. Dog had almost ceased to take food.

Feb. 7th: The dog's condition had become so bad that I chloroformed him. The amount of chloroform required was slight.

I could not trace any history as regards breeding, feeding or housing which would tend to dispose to this or any other illness.

In the latter part of his illness the musculature of the legs shrank almost incredibly.

Gross Examination.—The external surface of the femur stripped of muscle and fascia, presents numerous grayish red smooth granulations throughout its entire length. These vary in size from a pin's head to that of a small pea; are not easily separated from the bone, and present a fairly closer resemblance to miliary tubercles in other parts. These granulations are not as hard as normal osseous tissue, but generally of the consistency of articular cartilage. Some of them present evidences of partial calcification; this, however, is not particularly marked excepting at centre of the shaft, where the granulations are most abundant. The periosteum is somewhat thickened, but no portion shows any evidence of extensive suppurating foci.

Upon cross section through the centre of the shaft, no great variation from the normal is noted. Perhaps the compact external plates may be considered as somewhat thinned and the marrow space slightly increased.

On longitudinal section the thickness of the bone varies, the endosteum is thickened and hæmorrhagic; there are several cyst like cavities in the medulla, and the marrow does not contain its normal amount of fat, but is largely replaced by fibrin, which is streaked with blood.

Microscopic Examination :—Cross sections through the shaft of the bone show extensive pathological changes. The periosteum is much thickened, adherent, and shows circumscribed areas of necrosis surrounded by granulation tissue. These areas of necroses correspond to the numerous miliary tubercles noted on gross examination.

The vessels extending from the periosteum into the bone are surrounded by new cellular tissue, which causes an enlargement of the canals. The Haversian canals are much enlarged, contain numerous large mononuclear and multinuclear cells (osteoclasts). Numerous irregular branching channels which appear to be due to the enlargement and coalescence of the lacunæ and canaliculi are present throughout the actively diseased sections. The tissue replacing the absorbed bone consists of small spheroidal cells and new-formed fibrous tissue. The cancellous bone tissue is greatly diminished, and is largely replaced by dense masses of granulation tissue. The bone marrow shows great diminution of normal fat cells, an increase of fibrillar connective tissue, and areas of small hæmorrhages are present throughout.

It is of special interest to note that the foregoing pathological changes are very characteristic of the disease of osteomyelitis as seen in the human subject.

PLENALVIA IN A HOLSTEIN COW.*

By ALBERT BABB, A. B., M. D. C., Springfield, Ill.

My patient is a favorite animal belonging to Mrs. R., a widow, one of my wealthiest patrons. The history of the case is that the cow had been dull and had eaten nothing for about twenty-four hours. Prior to that time she had been fed night and morning liberally on malt and oats and had the run of a good pasture. The owner believed the attendant had been

* Presented before Illinois State V. M. A., at Bloomington, July 13, 1906.

feeding too many oats, stating that malt and grass had never given trouble before. My first visit was at noon, June 1st. The rumen was packed with food, the cow stupid, the pulse seventy per minute and the temperature normal. There was no meteorism worth mentioning and no perceptible borborygmi. The digestive machinery was evidently at a standstill. She got 3 iij barium chloride, 3 ss fl. ex. nux and 3 i sp. ammon. aromat. I left a quantity of the last mentioned drug and instructed the attendant to give an ounce every two hours. The owner, being very anxious for quick results, requested me to call again that day, which I did at 5.30 in the evening. No material change was noted at that hour and she got 3 x ol. lini and 3 vj gamboge. At 9.45 A. M. next day she was more stupid and reluctant to move, but otherwise apparently much in the same condition. She then got 3 xxvj ol. lini, 3 ss fl. ex. nux and lb. j common salt. The aromat. spts. ammonia was continued.

I had an out-of-town call and did not see her again till 11 P. M. of the same day. She was pretty much the same, but certainly no improvement had taken place. I gave arecoline hydrobromate, gr. jss, by needle, and barium chloride, 3 iv, by drench, and as she was somewhat tympanitic, tapped her. On June 3d, at 10 A. M., she got arecoline, gr. jss, barium chloride, 3 iij, and the aromatic spirits of ammonia was continued. Other professional work preventing, I could not make my evening call on her till 9.30.

On beholding her I was astonished. She was showing much dyspnoea, due to having ingested a large quantity of water during the day; the rumen was greatly distended with it and the food, and there were plain symptoms of exhaustion and collapse. Still the temperature was normal; the pulse, however, was about 120 per minute. She was about the most forlorn looking bovine I ever beheld. What was to be done? I gave an unfavorable prognosis to the attendant, but remarked that I would do the best I could. She got gr. ij arecoline, 3 iv bar. ch., and 3 ss nux was left for the night.

For five days she had passed no fæces and anorexia was complete. Next morning she was much brighter, her bowels were moving freely, and she showed a little appetite. Being busy, I did not call till 3.30 P. M.; she was still purging freely and had shrunk amazingly. Her pulse was then about 60 per minute. I left some more aromatic spirits of ammonia, also some acet. fl. ex. nux. That was my last visit to her, as her

recovery was rapid and uneventful. Arecoline and barium chloride had served me so well in such cases before that I was surprised at the slowness of this one.

RUPTURE OF THE HEART.

By MARTIN R. STEFFEN, M. D. C., El Paso, Texas.

A bay gelding, eight or nine years old, one of a team on a Wells Fargo express wagon, eats a few mouthfuls of his feed in the morning, but leaves the greater portion untouched. He is hitched with his mate and starts on his regular route, but is returned to the stable within half an hour because of severe dyspnoea, and spasmodic coughing and retching. The veterinarian is called and finds the horse as described above—coughing, retching and breathing spasmodically. The horse is taken to the hospital and choke diagnosed. A rounded mass appears in the middle third of the neck, and apparently in the oesophagus. After an hour froth mixed with a few food particles runs rather freely from the nose and the retching increases. The neck in the region of the choke is massaged for an indefinite period, and morphine given hypodermically. About noon a stomach tube is passed through the nostril, but cannot be gotten farther than the location of the swelling on the side of the neck; water is forced into the tube, but returns, and the tube is withdrawn; a few food particles are found on its end. Shortly after passing the stomach tube the animal appears intensely bloated and is at once tapped, which seems to afford relief. Nothing further is now done in the way of treatment, and the animal is turned into a clean corral with fresh water in reach. In a few hours the animal has a severe spasm, affecting apparently his entire body; his left pectoral limb seems to be paralyzed, and he begins to stagger and goes down, remaining in the recumbent position probably twenty minutes, when he again staggers to his feet and appears very much at ease. The retching and coughing fits are gone and his case appears hopeful. About eight o'clock he lies down without violence and dies with only a few struggles.

The post-mortem reveals the oesophagus clear of obstruction, but in its middle-third is an inflamed area about four inches long.

The heart is the seat of two ruptures, one about the size of a dime, situated at the apex of the left ventricle; the other, a ragged rupture about three inches long, higher up in the left ventricle. Other organs apparently normal with the exception

of a congested area in the cæcum around the point of entrance of the trocar.

[NOTE.—Heart rupture probably due to excessive straining. Operation described in June REVIEW by Dr. Merillat, page 386, would have saved this animal.—R. R. B.]

RHEUMATISM (?)

By MARTIN R. STEFFEN, M. D. C., El Paso, Texas.

An aged gelding, weighing about 900 lbs., makes his daily route on a delivery wagon. The next morning he is found extremely "sore" and very much "tied up" all around. The veterinarian upon his arrival finds him in a condition very much resembling tetanus, and at first glance mentally pronounces it such. Upon closer examination, however, this idea is dispelled and a positive diagnosis is not arrived at. The patient refuses to move, appears drawn in the flank; the slightest movement causes spasms of the entire musculature, but the membrana nictitans is passive.

Critical examination reveals absolutely nothing of importance. A rectal examination is now made, but brings no new light. The patient is given morphine hypodermically and left for the day. On the second day no change has taken place, and morphine is again given. On the third day the patient appears worse, and is put on treatment for rheumatism, in which phenylis salicylas figures chiefly. In three days the patient is quite supple, and a few days later is again in harness.

A NEEDLE AND THREAD IN A CAT'S JAW.

By R. A. STOUTE, D. V. S., Barbados, West Indies.

Some days ago a cat was brought to my infirmary, with the following history: About 5 P. M. the day previous, the cat ate its dinner all right. About 9 in the same evening it was unable to lap some milk. The owner attempted to feel the throat, with her finger, the natural result being that she was badly bitten.

I made a careful examination but could not find any foreign body in the throat. I then examined the mouth, and found a small red streak running along the inner side of the lower part of the jaw. Finding nothing else wrong, I decided to examine the outer surface. In doing so I found a very small hard spot on the inside of the left jaw. I opened the spot, and, to my surprise, extracted an ordinary sewing needle, with about three inches of cotton attached.

CONTRIBUTION TO THE RECORDS OF FECUNDITY.

By F. P. SCOTT, M. D. C., Oxford, Indiana.

In the REVIEW for May, 1906, page 223, reports of two remarkable cases of fecundity, in the cow and ewe respectively, are given. In October, 1905, my driving mare was very badly frightened by an automobile. Thirty-six hours afterwards she aborted three foals. This is the greatest number of which I have heard, though it may be common enough, nevertheless.

DR. MAYO'S WORK IN CUBA.—Dr. Nelson S. Mayo, Chief of the Cuban Bureau of Animal Industry, recently spent a week in Jamaica, W. I., studying the conditions and breeds of cattle in that island, with an eye toward importing into Cuba those which would apparently thrive there for beef and dairying purposes. The Kingston *Gleaner*, in an interview with Dr. Mayo, quotes him as follows: "I have come here to study the live stock industry of Jamaica, because we are almost in our infancy in Cuba with regard to the better kinds of live stock. The cattle industry of the Island was practically destroyed during the war of 1895-98. Before the war there were 2,500,000 head of cattle in Cuba. At the close of the war only four per cent. of that number remained. At the present time there are over 2,000,000 head of cattle in the Island, and within the next year we will probably reach the number which we had before the war. The Cuban Government is very desirous of introducing the best breed of live stock that seem to be adapted to tropical countries. We expect in a very few years to export beef, and, of course, we are preparing to compete in the world's markets. And for this reason we are introducing the Herefords, Short-horns, and Aberdeen Angus as beef cattle and the Jerseys and Holsteins as dairy cattle. We are going to introduce jacks and jennets for the purpose of breeding mules. The use of mules is increasing very rapidly, and to quite an extent they are replacing working cattle in the modern methods of agriculture. I am going to look at the East Indian cattle here—the Mysore —with a view of introducing these in Cuba on trial. We are now experimenting in the manufacture of butter and cheese with very good results. We are also manufacturing a vaccine against anthrax and against black-leg in cattle, which we furnish free to the citizens of Cuba for vaccinating their cattle. And further, we are looking after the contagious diseases of the animals and their suppression."

SURGICAL ITEMS.

BY DRs. LOUIS A. AND EDWARD MERRILLAT, CHICAGO, ILL.

AN UNUSUAL CASE OF BRACHIAL PARALYSIS.

The subject was an aged 1100-pound mare, presented for treatment with the complaint of inappetence, running down in flesh, and disinclination to pull loads or travel as before. The state of ill health dates back about a month, previous to which time she was said to have been a lively, well-nourished working animal. There was no history of a fall or injury of any description and the physical examination revealed no organic derangement. No diagnosis was made at the time, the state of ill health being attributed to old age. On a certain day about one month after the above described illness began, and while driving leisurely in a butcher's wagon, she became suddenly lame, in fact the left fore leg collapsed so completely that it was with the greatest difficulty that she was half dragged to a neighboring stable. An examination several hours later revealed a typical case of brachial paralysis. The truth of the driver's statement, that the animal had neither slipped nor



FIG. 1.



FIG. 2.



FIG. 3.

fallen was at first doubted, but the examination post-mortem showed that he had evidently told the truth.

The mare was removed to a convenient place for photographing and for the post-mortem examination. Fig. 1 shows the position of the paralyzed limb, typical of the disease. The foot is forward, the carpus is flexed and the olecranon is dropped to the level of the middle of the opposite radius. The caput muscles are limp. The revelations of the post-mortem examination are shown in Figs. 2 and 3—the first was fractured at its upper third. The rib was found to be easily pulled forward against the brachial nerves by traction on the scalenus muscle, which brought the segments to the angle shown in Fig. 3.

There was a slight accumulation of a yellowish congealed serum at the seat of fracture and a considerable extravasation of bloody serosity in the immediate surroundings. The rib was denuded of its periosteum for a distance of one inch in each direction from the point of fracture, which gave it the appearance of a polished bone. The denuded surface was in fact as smooth as a piece of bone could be made by polishing. There was no evidence of reaction to form a uniting callus except at some distance from the fractures, where several soft cartilaginous nodules had formed. The tendency to heal was indeed meagre. The fractured ends had been rounded by friction. They were serrated into several tooth-like projections that preserved the apposition of the bone for a time.

From these presents the case is very easily explained: The mare evidently sustained a *fracture without displacement* of the first rib, which brought about the state of ill health, and at a certain moment about one month later, the fracture, which had made no progress toward healing, was suddenly dislocated by a slight stumble or sudden elevation of the head, unnoticed by the driver.

The relations of *fracture of the first rib* to *brachial paralysis* have not been satisfactorily demonstrated. It has not been shown exactly how frequently the latter is caused by the former. Some writers have not associated them. For example, Cadiot and Almy in their new work ignore this feature of the disease entirely, although all other phases are mentioned and described in detail. Only a few of these cases seem to have been properly investigated, but from evidence gathered here and there from our own observations, we opine that fracture is very frequently the cause. It is also quite certain that the frac-

ture is sometimes sustained without falling. The violent traction of the scalenus muscle on the rib as a horse makes a desperate effort to recover from a bad stumble, has, to our own knowledge, caused the rib to fracture in at least two cases. Whether there existed a rarefying condition of the bones to predispose, was unfortunately not determined.

ONE NIGHT RECORD OF AUTO ACCIDENTS.—Mounted policeman run down by auto in Bronx; he and woman dying; two others hurt. . . . Two killed, four hurt in collision between auto and farm wagon in Queens Borough. . . . Two girls run down by auto on Broadway; one dying. . . . Doctor and wife thrown from auto when hit by trolley car at Sixth avenue and Twenty-eighth street. . . . Miss Ellen Wray thrown from cab at Sixth avenue and Twenty-second street when, avoiding auto, cab was hit by car.—(*N. Y. American*, Aug. 10.)

FIND A HORSE 30 FEET LONG.—*Lander, Wyo., July 19.*—The fossilized skeleton of a giant horse has been discovered in the Big Sweetwater divide fossil beds by archæologists. The discovery overthrows the accepted theory that the horse was evolved from a small animal which is found in the Wyoming fossil beds. This skeleton is 30 feet long and fully as tall and is in an excellent state of preservation. It was an herbivorous animal and the jaw bone displays powerful grinders, which are but little decayed. The Chicago University and American Museum have been notified and both have announced their intention of starting archæologists for the scene of the find. There are a dozen different parties of scientific men searching the fossil beds this summer.

PRICE OF CARRIAGE HORSES.—The New York *Herald* of Aug. 12 is the REVIEW's authority for the statement that dealers are paying \$1000 for trotting-bred carriage horses in the rough—the same class of animals that brought \$500 five years ago, before the automobile became a factor in pleasure transportation. If the devil wagon keeps increasing in numbers, the fine carriage horse will reach prohibitive prices. From recent statistics, however, autos are being thrown upon the scrap heap about as rapidly as they are being produced by the myriads of manufacturers. When purse strings tighten at the next Presidential election, watch the "bubble" manufacturers burst. The people are making money so fast that they must have some expensive fad upon which to expend their wealth.

ARMY VETERINARY DEPARTMENT.

THE VETERINARY SERVICE OF THE UNITED STATES ARMY AND THE MILITARY VETERINARIAN.*

By CHAS. H. JEWELL, Veterinarian, 13th Cavalry, U. S. Army.

History of the Veterinary Service in the U. S. Army.—

This branch of the military service is one which in times past has received less consideration from the War Department than any other part of our small but efficient army. Whether it be for lack of importance in the eyes of the War Department, prejudice toward the profession as it was practised in times past, or being too busily absorbed in the fighting constituents of the military body, are questions which, being unable, I will make no attempt to answer, and will allow my hearers to draw their own conclusions.

During the Civil War there were no veterinarians employed in the Union army, such work being done by the troop farriers. This lack of proper veterinary service has often been commented upon as resulting in the loss of thousands of dollars' worth of horses which might otherwise have been saved to the Government. This was well illustrated during the Civil War, when for lack of proper care the cavalry service became so badly crippled that it became necessary to establish camps for the recuperation of the sick and disabled animals. Had there been veterinarians to look after these animals the greater number of them could have been kept at work and in this manner greatly improved the efficiency of the cavalry service.

After the Civil War, Dr. Tempny, now of the 9th Cavalry, who was then an enlisted man, was chosen from among the troop farriers stationed at Carlisle Barracks, to act as post farrier, assuming the duties of veterinarian. He was classed as an extra-duty man, and received the extra compensation of fifty cents per day, making his salary about thirty dollars per month exclusive of clothing, rations, etc. He was furnished chests of proprietary medicines, supplied to the Quartermaster's Department by one Dr. Enos Sanders. This marked the beginning of the veterinary service in the army.

Dr. Tempny, to whom I am indebted for the data of this early history, is still in the service, at the age of 68 years, hav-

* Presented at 43d Annual Meeting of the American Veterinary Medical Association, at New Haven, Conn., Aug. 21-24, 1906.

ing served 40 years as enlisted man and veterinarian, about 31 years in the latter capacity, and is as yet denied retirement, there being no such provision under the present law.

It was not long after the above start was made that regular veterinarians were appointed, with the titles of Senior and Junior Veterinarian, the senior to receive \$100 per month and the junior \$75, with assimilated rank of sergeant-major, receiving quarters and allowances of the same kind. These titles of seniors and juniors were for the new regiments formed at that time (7th, 8th, 9th, and 10th Cavalry). The veterinarians of the other six regiments drew \$75 per month. It was not required that these men be graduates of veterinary colleges.

At this time the supply of drugs was limited to 33 different articles, for administering to all the ills that the army horse might be heir to.

Although frequent attempts were made from time to time to increase the efficiency of the veterinary service of the army, the status remained as mentioned up to the time of the reorganization of the army, when, in March, 1899, the present veterinary bill was passed and later amended on February 2, 1901. The original bill of 1899 provided for veterinarians, first and second class. Those of the first class received the pay and allowance of a second lieutenant mounted, while those of the second class received \$75 per month with the allowance of a sergeant-major. The amendment of February 2, 1901, did away with this classification, and each now receive the pay and allowance of a second lieutenant mounted. This act provides for forty-two veterinarians, thirty for the cavalry and twelve for the mounted batteries of artillery.

The advancement of the veterinary service in the army has been a constant struggle from the beginning, and we can safely say that, had it not been for the efforts of our lamented Huidekoper combined with those of this Association, we would not now have even the present law, which has done much to increase the efficiency of the service, by attracting into the army a class of young men who, by their ability and attention to duty, have made a most favorable impression among the army officers.

That the present status is lacking in so many ways in promoting efficiency and contentment will be shown in the following extract from the head of the War Department, submitted to the last session of Congress along with the bill now pending before that body:

"CALENDAR No. 3531.
SENATE.

"59th Congress, 1st Session,

Report No. 3476.

"Efficiency of the Veterinary Service of the Army.

May 11, 1906.—Ordered to be Printed

"Mr. Warren, from the Committee on Military Affairs, submitted the following

"REPORT.

"(To accompany S. 3927)

"The Committee on Military Affairs having carefully considered the bill (S 3927) to increase the efficiency of the veterinary service of the Army, beg leave to report it back to the Senate with the recommendation that it do pass.

"Competent veterinarians are indispensable in the Army, especially in the cavalry and artillery, considered from the standpoint of efficiency of the service as well as economy. Thoroughly competent and up-to-date veterinarians must be in attendance in the purchase of horses, to pass upon the health and soundness and expected endurance of the animals; and from the purchase all throughout the life and service of the animal constant care and watchfulness is necessary to prevent and cure disease epidemic, contagious, or otherwise.

"A good veterinarian can make and save for the Government many times the amount of his salary as compared with the losses through incompetency in the profession.

"This branch of the service admittedly has never been upon a satisfactory basis. Some served with the relative rank, pay, and allowances of second lieutenants, while others served at \$75 per month, and two of the most valuable men in the service, who served at the lowest rate, are now serving beyond the age limit usual in army retirement, one being 70 yrs. old and the other 66.

"It has been demonstrated that it is almost impossible to find men sufficiently competent to undertake the duties who will accept the pay and allowances of a second lieutenant, with no prospect of promotion, no increase of pay for foreign service, no commutation of quarters, no retirement with pay, and no pensionable status, and under the present law a veterinarian is neither a commissioned officer nor an enlisted man.

"The following letter from the honorable Secretary of War,

recommending the passage of this bill, gives the present situation and the changes sought through the enactment of the proposed measure :

“ ‘ WAR DEPARTMENT,

“ ‘ WASHINGTON, January 27th, 1906.

“ ‘ SIR : I have the honor to transmit herewith a draft for the reorganization of the veterinary service of the Army.

“ ‘ From a memorandum prepared by the Chief of Staff it appears that the primary object of the bill is to remedy the apparently unintentional injustice of depriving the veterinarians of the benefits of the pension and retirement laws and of increase of pay for foreign service. The veterinarian is made by the law a part of the Army, but as he is neither commissioned nor enlisted he is not entitled to the benefits granted officers and enlisted men.

“ ‘ Another object is to attract a suitable class of men, thus keeping pace in the service with the advance of the veterinarian in civil life.

“ ‘ Young men of good education, graduates of veterinary colleges of good standing, are needed in the service. Their duties include the instruction of young officers and enlisted men. The “ horse doctor ” of former days is not satisfactory as a veterinarian in the Army.

“ ‘ Under the present law each cavalry regiment has two veterinarians and 12 are authorized for the artillery corps, 42 in all. The bill provides one veterinarian for each battalion of field artillery, and as there are 13 of these battalions, the total number of veterinarians is increased by one. Should the field artillery be organized into regiments of two battalions each, the number of veterinarians to the regiment would be the same as in the cavalry.

“ ‘ Eight of the veterinarians now in the service have served more than 15 years each. One has 34 years of service and is 70 years old ; another 29 years of service and is 66 years old. The proposed measure gives just recognition for faithful service in the past as well as providing for increased efficiency in the future.

“ ‘ THE BILL.

“ ‘ Qualification for future appointments. The applicant must be a citizen of the United States, unmarried, between 21 and 27 years of age, a graduate of a veterinary college of good standing, and must pass a satisfactory examination as to habits, moral character, mental and physical ability, education, pro-

fessional qualifications, and general fitness for the service.

“ ‘Advancement. For the first 10 years of his service the veterinarian is to receive the pay and allowances of a second lieutenant, mounted (the same as now). After 10 years’ service, and upon passing a satisfactory examination, he is to receive the pay and allowances of a first lieutenant, mounted.

“ ‘Tenure of office. The veterinarian is to be on the same footing as a commissioned officer of the Army as to tenure of office, retirement, pensions, and increase of pay.

“ ‘Veterinarians in the service. (1) Those who have served 15 years may be appointed without examination, and any who have so served and are more than 64 years of age may be appointed and retired.

“ ‘(2) Those who have served 10 years at date of appointment are to be examined only once, *i.e.*, if they pass the prescribed examination they at once have increased pay and allowances corresponding to length of service.

“ ‘(3) Any who are not appointed under the proposed measure, *i.e.*, any who fail to pass the examination, or decline to take it, are to be discharged with three months’ pay.

“ ‘Expense. Should all line of the veterinarians having more than 10 years of service and the additional veterinarian be appointed under the proposed bill, the increased annual expense would be \$2,700.00. The only further expense would arise from the increased pay to which each veterinarian would be entitled after 10 years’ service.

“ ‘In the interests of the efficiency of the veterinary service of the Army, I urgently recommend this bill to your favorable consideration. Should your committee, on the consideration of this measure, desire the presence of those officers of the General Staff who have made a special study of this subject for the further explanation of its merits, they will be instructed to report as you may desire. Very respectfully,

“ ‘WM. H. TAFT, *Secretary of War.*

“ ‘The Chairman Committee on Military Affairs,

“ ‘United States Senate.’ ”

Advantages afforded Veterinarians by the Military Service:

—To those who enjoy traveling there has been every opportunity since the acquisition of the insular possessions, and this is the means of a broad education which one can not appreciate who has never had the opportunities. In this way one comes in contact with people of the various parts of the world and must necessarily become broader minded.

Our veterinarians who have served in the Philippines have had good opportunities of studying the various tropical diseases, and it has proven to be of untold value in saving to the government thousands of dollars worth of horses. Examples of our ignorance of these diseases were manifested during the Spanish-American war, and resulted in great losses of animals.

The army veterinarian has plenty of time for study, recreation, etc. On this account, along with the open-air life, it is one of the most healthy occupations one could choose.

The associations are, as a rule, of a pleasant nature, due to the fact that the whole service has a personal feeling for its members, and if one proves himself worthy he will never lack for friends, whether it be in prosperity or adversity. Our associates are, as a rule, men and women of refinement and education and reared in the best families of the land. Under such influence, a person is bound to develop in every way possible.

In times of sickness one is cared for by the best obtainable medical assistance, and pay does not cease as in the case of men in civil life. The charity of the army is well shown in the cases of our old colleagues in the service, who, being unable to retire under the present law, are held in the service and their burdens made as light as possible until such time as they may be retired. Their case is in strong contrast to what we all see so often in the case of our large corporations, who fill the places of all their employés just as soon as they begin to reach the decline of life.

Each year one veterinarian is chosen to represent the army veterinarians at the American Veterinary Medical Association, and his expenses are defrayed by the War Department, through mileage allowance provided for officers traveling under orders, this being done to enable the military veterinarians to keep abreast of the times with any advancement of the profession.

The Disadvantages Incident to the Military Service:—The disadvantages in many ways offset the advantages above set forth, and, since my paper is to be one of plain facts concerning the service, I will as fully describe them.

A permanent residence is denied a person in the military service, and one is unable to settle down in a place most suitable to his individual likes. This would be a serious objection to those who are fond of a permanent home.

The army veterinarian is greatly handicapped in the performance of his work, due to lack of authority, which exists under the present law, since his only real authority lies in his

commanding officer. If he be a liberal-minded man he is given full power to carry into effect proper methods for the care of the animals under his charge. But if, on the other hand, this power be vested in a person of radical ideas or lacking experience, one can accomplish but little good.

Under the ambiguity of the present law, we are deprived of many privileges which are justly due us and I believe were intended for us, such as the extra ten per cent. for foreign service and commutation in lieu of quarters when such are not available. The army regulations provide for commissioned officers only and since we are not commissioned the comptroller ruled us out of the same.

There is no advancement or retirement for age or disability. These injustices naturally breed a spirit of discontent among the army veterinarians.

Since prestige in the military organization comes only through being commissioned, one can readily see that we must necessarily lack this important qualification both among the officers and enlisted men.

The Needs of the Service:—The needs of the service are many, and are so conceded by all liberal-minded men, but "all things come to him who waits," and the army veterinarians have waited and will in all probabilities wait a long time, before an ideal service be established.

In order to receive the greatest benefits from the veterinary service, it should be organized as a separate corps with a head, similar to the Medical Corps, with rank or its equivalent, if such be possible, and the remuneration which such would call for. Men should be enlisted for this corps and be given rank similar to that given noncommissioned officers of the line. As it is at present, the farrier is under the directions of his troop commander, and he is made and relieved at this officer's will, and it often happens that a farrier is no sooner trained to his duties than he is made a noncommissioned officer. To this we do not feel like objecting, since it is an advancement for him which he otherwise cannot obtain while acting in the capacity of troop farrier.

The same can be said of the troop horseshoer.

The service is greatly in need of veterinary hospitals, built on modern ideas, with permanent assistants in attendance. We have one in the United States, and this is in connection with the School of Application at Fort Riley, Kansas. The work accomplished at that place should bear fruit in a way that they may

be established at all the larger posts throughout the United States and Philippines.

In connection with the needs of the service, a few words in regard to the class of men desired in the military service will not be out of place, and at the same time, give those who have a desire to enter the service some idea of what is required of them. In no other walk of life is so high a standard set upon education and refinement as that for an official position in the Army, and since the veterinarian is now considered in this class he is expected to fill the position in every detail. If he lacks these qualifications, the army life would be unbearable, owing to the fact that his associates, being men of this type, would not fraternize with him.

The Requirement Necessary for Entrance into the Veterinary Service of the U. S. Army:—The applicant shall pass a physical examination and come up to the standard required of a recruit. He shall be a graduate of a recognized veterinary college having a three-years course, with at least a six-months session each year. He must furnish evidence of a good moral character and aptitude for the service. The latter to be judged by the board of officers appointed to examine him, and he is obliged to pass above sixty-five per cent. in each of the following subjects: English, including reading, spelling, and grammar; American history; geography, and arithmetic. This makes up the basic examination. The professional examination consists of the following: Anatomy and physiology; materia medica; practice of medicine; sanitary medicine; surgery; meat inspection; pathology; feeding and watering; bitting and saddling; horseshoeing; conformation and soundness. This examination covers a period of eight days, and is most thorough in its nature. It may be said why this thorough examination, with so little prospects for the veterinarian in the army. To those I would state that with the high standard maintained there is bound to be a bright future for the army veterinarian and we have renewed hopes after the recommendations made by the Secretary of War, Hon. Wm. H. Taft. Should we get this modest allowance it will be a stepping-stone toward future advancement.

The Pay of the Army Veterinarian:—The salary of the army veterinarian is not one to enable him to live in luxury, although one can live nicely, if he does not aspire to high social attainments. Like all other public officials, the army officers are underpaid, when it is taken into consideration the position they are supposed to uphold in the social world, and since the

possession of the Philippines, the travel necessary makes an increase of living expenses, and if a man has a family, his salary is inadequate. The pay of army officers was fixed years ago, when the price of living was about one-half of what it is to-day.

The salary of army veterinarians is fixed by law and consists of the pay and allowances of a second lieutenant mounted, which is \$1,500 per annum with increase of 10 per cent. each 5 years up to 20 years, quarters, feed for two horses, commissary and quartermaster privileges included. The latter includes the privilege of purchasing supplies at wholesale prices. Under this provision a veterinarian of 20 years service draws \$2,100 per annum, quarters, etc., which in civil life would be considered a very good compensation. Each year he is allowed one month's leave with full pay; if it may, if not taken yearly, accumulate until at the end of four years, four months is allowed.

The Work of the Army Veterinarian.—The duties of the military veterinarian are as a rule very pleasant to one who takes pleasure in his profession. Garrison work consists in the daily visit to all the stables and giving directions to the farriers or stable orderlies, for the treatment of the sick or injured animals. The ordinary work can be entrusted to these men in the same manner as a physician entrusts his patients to the trained nurse, whereas all difficult operations are done by the veterinarian personally.

In the Army we have a training school for farriers and blacksmiths, located at Fort Riley, Kansas, which is a model institution. This school is under the directions of the commandant, Colonel E. S. Godfrey, 9th Cavalry. Captain Walter Short, 13th Cavalry, director; Captain Wm. J. Snow, Artillery Corps, secretary; four veterinarians as instructors, Drs. Plummer, Willyoung, Dowd, and myself; and one assistant instructor, Mr. Frank Churchill. Dr. Dowd is a civil service veterinarian, and has charge of the instruction in horseshoeing. The course is of four months' duration, with two classes a year. The farriers are taught the gross anatomy and the common diseases and injuries which the army horse may be subject to. The instruction is both practical and theoretical. The theory is taught from a farriers' handbook, entitled "The Army Horse in Accident and Disease." Practical work is taught at the large new veterinary hospital. The horseshoers are taught in the same manner, a companion text-book being used, entitled "The Army Horseshoer." Both of these text-books were compiled by the instructors and published by the War Department.

I ask pardon for dwelling at length upon this school, but since it is to all practical purposes an army veterinary institution, and all veterinarians in the service are subject to detail to this school, I deem it of great interest in connection with the veterinary work of the Army. Again, this is one of the places where the military veterinarian is brought more into the light of the Army, by his instructions to the student officers, than at any other post in the United States.

In garrison the veterinarian is usually detailed to instruct farriers and blacksmiths in the theory and practice of their respective work. He may be detailed to instruct the officers in hippology. In the latter case he acts as an assistant to some commissioned officer, usually a captain of the post school staff. The veterinarian not being commissioned, is not eligible as a full instructor to this staff, even though by the nature of the position he fills he should know more about the subject than the instructor under whom he acts.

The veterinarians are detailed upon boards for purchase of horses for the Army, his duties being to pass judgment upon soundness of animals brought before this body.

One veterinarian is detailed as assistant instructor in hippology at the Infantry and Cavalry School, Fort Leavenworth. This position is not regularly changed as is the detail at Fort Riley, and it has been filled for a long time by Dr. S. L. Hunter, of the 6th Cavalry.

Veterinarians are usually required to accompany their respective commands in the field, and must be competent to care for the animals upon the march if needs be.

The military duties of the line are not required of him, yet he may be called upon to take part in reviews and parades, if so ordered by the commanding officer. He is now authorized but not required to take part in target practice, and is given credit for the record made.

The Social Position of the Army Veterinarian:—The social side of army life is of a type peculiar to the military service, and of a very restricted nature. Army people generally are very exclusive in a social way, and, as a rule, do not mingle to any great extent with people of civil life. The social events of garrison life consist of dancing, card parties, entertaining brother officers and their families at dinner parties, etc. The social position of the veterinarian in garrison life is what he is capable of making for himself; if he proves himself to be a gentleman he is so taken by the officers and their families. If

it be otherwise he is completely ostracized, even much more readily than if he were a commissioned officer, for it is assumed that the latter is an officer and a gentleman, whereas the veterinarian must prove himself to be such.

Since society in the Army is governed, to a great extent, by rank, as well as all other things pertaining to the service, it is not expected that the veterinarian would be a social leader in garrison life, yet he and his family are usually shown the ordinary courtesies given other officers.

The old idea existing in the Army that the "horse doctor" was a personage unfit to associate with gentlemen and ladies of high social attainments is gradually dying out, and he is now taken for what he can prove himself to be. Yet, there are still some in the service who cling to the old idea and will not treat the veterinarian as his equal in a social way. With this class, we could only be their equals by being made such by an act of Congress, granting us commissions. I am glad to state that it is but seldom we meet this class in the Army to-day.

Résumé.:—In presenting this paper I have endeavored to clearly show the various phases of the position of the army veterinarian, which I believe to be but little understood by our colleagues in civil life; and if, by presenting this article before this enlightened body of brother veterinarians, I am enabled to interest you in our welfare, which ought to be in common with yours, I will feel that I have accomplished something toward a most worthy cause.

FATAL DISEASE OF CATTLE IN TASMANIA.—A disease of cattle closely resembling that known in Australia as "dry bible" has been decimating the herds of Tasmania, and the Government veterinarian, Dr. Willmot, called in consultation Veterinary Surgeon Desmond, of South Australia, and together they made an extensive investigation, holding many post-mortems and taking specimens of the various tissues for microscopical and bacteriological examination. It is in the judgment of Drs. Willmot and Desmond of cryptogamic origin, but the exact source of infection is not known. It results in paralysis, while congestion of the brain and meninges appears to be a rather constant post-mortem lesion. We trust Dr. Desmond, who is a fluent writer and a member of the A. V. M. A., will give the results of his present investigations to the profession. The REVIEW will gladly accord him whatever space he may require for the purpose.

EXTRACTS FROM EXCHANGES.

GERMAN REVIEW.

By J. P. O'LEARY, M. D. V., Bureau of Animal Industry, Buffalo, N. Y.

A FEW FORMS OF AUTO-INTOXICATION IN THE DOMESTICATED ANIMALS [*Tierarzt C. T. Hansen*].—By auto-intoxication, or self-poisoning, we understand diseased conditions which are induced by poisonous principles which form in the body with abnormal changes in the body juices, its tissues, or in its secretions. The auto-intoxications which extend from the intestinal canal play an important part in the domesticated animals; however, they are still little known and described. Very frequently a disease occurs in cattle which is characterized as an auto-intoxication extending from the intestinal tract; it affects particularly the nervous system and depresses the sensory and motor functions. For this reason it resembles parturient fever. The disease was observed in cows (mostly old ones) at various times during the period of lactation, likewise in cows which were almost dry and not over 2 months of calving, and in cows in the mediate stage of pregnancy; also in fat cows. The author regards as a cause, a relative over-feeding. The digestive organs are surcharged with a large quantity of rich food, which consists of concentrated feeds, oats, green rye, rich young grass and the like. Thus an animal receives more food than it can digest under normal conditions. As a result, the fermentations and changes of the food become abnormal and the poisonous products of the fermentative changes which are formed thereby are taken up by the blood and affect the central nervous system. This poisonous effect must be of a functional nature, as is proved by the acute course of the disease, for histological changes do not always take place. As to the etiology of the disease, it is said that in years when there is a straw famine the disease is especially frequent, since in the winter in many places where cows receive daily only 2 to 5 pounds of straw feed and also heavily fed upon concentrated feeds and roots. The symptoms vary according to the intensity of the disease and up to the time at which the veterinarian is called in. In severe cases we find the conditions as follows: The owner states that the cows 6 to 12 hours previously ceased to eat and give milk, and after a short time be-

gan to sway. The cows are usually found lying, the expression of the eyes is sleepy, the eyelids droop somewhat, the horns and skin are cold; the temperature registers 35.5 to 37.5°C.; the pulse is weak and rapid; the breathing is not specially accelerated; appetite for food and water absent; the udder is flabby; the peristaltic movement of the rumen is suppressed; the abdomen is bloated, sometimes to a considerable degree, and as the cows frequently make a smacking noise with their mouths and grind their teeth, the owner imagines the disease is due to some obstruction lodged in the œsophagus. As a rule the bowels become constipated. The fæces found in the rectum are of normal consistence, but foul smelling and are here and there crusty on the surface. The rumen is more or less tympanitic. It is impossible to get the animals upon their feet; if they stand up they stagger back and forth and fall down again. In severe cases the cows become comatose, with consequent paralysis of the tongue and difficulty in swallowing. In milder cases the temperature is normal; the horns are somewhat cold; the appetite disappears; the milk secretion diminished; the peristaltic movement of the paunch limited; the left flank somewhat tympanitic; fæcal movements are few; the gait of the hind legs is unsteady, tottering. The differential diagnosis is easy as a rule. As a result of the history we must not confound this disease with impaction of the rumen. The graver cases may be confused with calving fever (parturient paresis) at the time of lactation. With different septic conditions, particularly with such septic diseases of the udder and uterus as produce similar symptoms, a careful examination will soon decide. Sometimes an acute mastitis which is not septic can be accompanied by a similar paresis; still of course this has a different origin. Sometimes cattle are subject to a cerebro spinal meningitis which is difficult of differentiation, but in this case, too, paralysis of the œsophagus is the predominating symptom. The course and prognosis of the disease is favorable by timely and accompanying rational treatment. In a short time the cows will become more lively, and stand up in from 2 to 20 hours and regain their appetite at once, which in the course of one or two days has been rapidly restored. Nevertheless, death may ensue in the course of a few hours, probably the result of cardiac paralysis. In some instances the paralysis may last 2 to 3 days. Treatment plays an essential rôle. The cows must have a good bed of straw, be placed upon the right side and must rest upon the sternum, then covered with warm wet

cloths, which in turn are covered with straw or blankets; besides, they must get at once a powder consisting of 10 grammes of potassium iodide + 100 grammes of sodium sulphate, + 20 grammes of calamus root (*rhizome calami*), and after the lapse of 6 hours chloride of sodium and bitter remedies in 24 hours. The iodide of potassium seems to possess a specific effect, possibly in the splitting up of the iodine in the digestive canal; it retains its disinfective power for a long time. Occasionally the udder should be treated as in the case of parturient fever. In swine, there appears an auto-intoxication which resembles the symptoms observed in cows, and probably is brought about in the same way. Some of the symptoms resemble the eclampsia preceding or following parturition. Horses are likewise affected with a disease between the ages of 1 to 3 years, particularly in early summer and while out on pasture, also too in the stable and at other times of the year. Its prominent symptoms are a more or less pronounced paresis, particularly in the hind legs. The cause of the disease is very obscure. As the disease appears principally in the early summer and while the animals are out in the pasture, it was thought to be due to a grass poisoning, together with cold night air; that the latter plays a part has been proven. The circumstances under which the disease appears also in the stable, even when grass has not been fed, does not conflict with the above-mentioned theory, for the reason that similar poisonous elements can be formed in the digestive canal by various food materials. Toxic substances forming in the intestinal canal would exercise a specific effect upon the spinal cord. Ray grass, corn stalk, rye poisoning, can be definitely excluded. The disease is absolutely non-infectious. It affects stallions, geldings and mares. A hereditary disposition can be present. In the progeny of certain stallions a considerable number of foals were affected with the malady. It is a disease of foals; it was not observed in horses over 3 years of age, and rarely in these. The disease sets in rapidly, without any premonitory symptoms. As we are dealing with foals, the veterinarian is not frequently called early in the disease. Very often the owner thinks the animals are foundered, as they cannot go backward. The symptoms vary with the gravity of the case. In severe cases the veterinarian is called in immediately; he finds the foal standing swaying on the fore and hind quarters of the body, supported by two or three men. The neck is extended on moving the animal and turned from one side to the other. The foal is not in condition to

move without falling, if not well supported, and when once down it is not able to regain its feet, or until at least after several fruitless attempts. Control is lost over the movement of the limbs, particularly the posterior members. The gait is swaying, tottering, and the knees knock together. If the animal is forced to back with head raised, it usually falls over backward. At other times the foal cannot stand upon its hind legs. The general condition of the health is very good as a rule. Consciousness is not disturbed; the pulse is slightly accelerated; the temperature in these cases remains slightly above 39°C. The appetite is somewhat diminished during the first days. If the animal has lain for some time, there appears now and then symptoms of uneasiness, which are caused by constantly lying. Sensation is diminished in the posterior region, as proved by pricking the parts with a pin. In slight cases the general health is not affected, and the owner has remarked no diminution of the appetite. The movement of the hind legs is uncertain and tottering, especially when the animal is made to trot. The course of the disease is usually chronic; it lasts from months to a year. Yet in grave cases, if the foal cannot stand, death frequently follows (as a result of lying and pressure), in the course of 1 to 2 weeks. Recovery in these cases is dreadfully tedious and we can perceive, as a rule, during the first 6 months an uncertainty in backing the animal, more particularly in wry-necked horses, and there also appears now and then a kind of stringhalt or cramp in the hind legs. The prognosis must be guarded. Of course life can be preserved as a rule, but in quite a number of cases the foal retains a staggering or sliding backward movement for $\frac{1}{2}$ to 1 year; this is particularly prominent in going down hill. When the foal attains the age of 3 to 4 years, it can be sold for full value. This disease cannot be well mistaken for cerebro-spinal meningitis, for with the latter we have accompanying spasms and difficulty in swallowing, and the animal really does not stagger. Severe cases of muscular rheumatism possess a certain similarity to this disease; if the animal lays down it cannot get up, but when it is upon its feet again the gait is more stiff than really staggering. Traumatic injuries to the spinal column which cause paresis admit of exclusion as a rule, partly on the ground of the clinical history and of a close examination of the patient. When foals are tethered a sprain of the neck may result, which may cause similar symptoms, but here a stiffness of the neck may be easily demonstrated. Even similar forms of

paralysis may be the result of various pathological conditions of the spinal marrow; for example: circumscribed tumors, hæmorrhages, or like lesions. Treatment.—Medicinal agents have little value; on the contrary, nursing is of prime importance. In severe cases the foal should always be placed in a stall for two weeks, and should receive an easily digestible, nourishing diet. If it cannot stand it should be raised upon its feet and supported by means of slings, and kept clothed. The medicinal remedies used by mouth, as sodium salicylate and potassium iodide and strychnine, as also the irritants usually applied to the back, have no beneficial effects whatever.—(*Masnedsskrift för Dyrlæger, 17. Band, September, 1905, Seite 177-188.*)

ITALIAN REVIEW.

By PROF. A. LIAUTARD, M. D., V. M.

PAPILLIFEROUS CYST OF THE UTERINE HORN IN A BITCH, WITH EXTENSIVE METASTATIC DIFFUSION [*Prof. Angelo Baldoni*].—This animal was 11 years old. Up to 1900 she had raised four litters of puppies, but in 1901 all the young ones died, and after a few days she had a swelling on one side of the mammæ, which softened, ulcerated, and healed, leaving a little hard tumor, which had to be removed in 1902. A year after it had returned. In 1904 the abdomen began to get large, the animal lost her appetite, vomited, grew thin, and was brought to Prof. A. B. The abdomen was much swollen and dropped as low as the hocks. A hard body, as large as a man's head, is felt in its cavity. There is collection of food in the abdomen. On both mammæ there are tumors of various sizes. The mucous membrane of the mouth is pale and slightly yellowish, respiration accelerated, pulse quick, temperature 37.7 C. The animal objects to move, and when she is made to her respiration is hurried, while the beatings of the heart are considerably disturbed. The diagnosis of abdominal tumor with effusion was positive, and the nature of the growth suspected by the previous history and present condition of the mammæ. It was cystic fibrosarcoma, which, as revealed by the post-mortem, had spread to the whole organism by metastasis. The condition of the animal was presented to the owner with all the risks to run. An operation was decided upon. The removal of the growth from the abdomen was quite difficult and delicate on account of its size

and adhesions which existed between it, the large portion of the omentum and the right horn of the uterus, which had to be removed with it. The operation was long and tedious, and the life of the patient was threatened while under chloroform, but was finally concluded and the wound closed. During the first four days the case looked doubtful, but the dog resisted and in a comparatively short time was able to go home, where she remained in comparatively healthy condition for a while, but after four or five months had a relapse, and after a few days died. At the post-mortem tumors of the same nature were found in almost every organ of the abdominal and thoracic cavities. The tumor taken from the abdomen weighed 1945 grammes and measured 50 centimetres in circumference.—(*Clinica Veterinaria*.)

ACUTE METRORRHAGIA IN A COW [*G. Blanchedi*].—A cow, six years of age, is sold to a cattle dealer; she is eight months pregnant and in poor condition. The buyer is informed that she is losing much blood by the vagina, drop by drop, and more abundantly while being milked. This loss of blood does not seem to interfere with her general functions nor during the two preceding gestations. During the two months previous to her delivery she has lost blood in the same way, and yet has delivered in the best condition, and the calves were robust and healthy. The buyer takes the cow anyway, and with others walks her home, a distance of 50 kilometres. Arrived at her destination, the vulvar discharge is a true hæmorrhage, which soon becomes alarming. After a few days the condition has improved and the buyer wants to return the cow to the vendor, who consents on condition that the animal is brought back to him at once. The cow dies before reaching home. At the autopsy were found: generalized anæmia, the large bloodvessels containing but very small clots of blood. The foetus was in vertebro-sacral position; the walls of the uterus had a strong purplish color; there was no blood in the uterus. The most important lesion and the probable cause of the metrorrhagia was the condition of some twenty cotyledons, which were separated and loose on the envelopes as well as on the uterus. The others were only slightly adherent and could be easily separated.—(*Clinica Veterinaria*.)

FISTULA OF STENO'S DUCT BY DISPLACEMENT OF THE OPENING OF TERMINATION THROUGH TRAUMATISM [*Prof. J. Baldoni*].—Fistulæ of Steno's duct are not rare. But this case is peculiar on account of the ending of the canal taking place

on the outer surface of the cheek. A yearling colt, while playing in the field, grabs between his teeth a piece of wood, sharp at one end, which by a sudden motion of the head is stuck in the mouth and makes a lacerated wound of the left cheek from inward outward, a wound which for six months remains rebellious to all treatment. The wound is situated in front of the masseter muscle, and runs along the long axis of the head a distance of seven centimetres. At the upper end there is a little projecting surface, covered with mucous membrane and resembling the elevation which exists on the inside of the cheek in normal condition. In the centre of this there is a small opening which allows the introduction of a fine probe; it is that of Steno's duct, from which saliva escapes more or less abundantly according to the motions of the jaw, and which has been pushed outwards and displaced by the traumatism. Through the large wound solid and liquid food escapes. Inside the mouth on a level with the third and fourth molars the opening of the duct is missing and the buccal mucous membrane is normal, except on the edges of the wound. The laceration of the cheek was enlarged by incision of its two ends, the duct isolated by careful dissection, and brought back to the buccal membrane with stitches. By superposed stitches the injured tissues were brought together and the skin, closed with firm sutures, was dusted over with iodoform. Secured to prevent rubbing, the horse was kept fasting for a few days, the wound being simply treated by washing with alcohol and dusting with iodoform. Cicatrization was perfect in eighteen days, with restoration of the parotid canal in its proper place.—(*Clinica Veterinaria*.)

COCAINIZATION OF THE SCIATIC AND PERONEAL NERVES [Dr. Domenico Bernardini].—A mare, 12 years old, was affected with severe lameness. The veterinarian in attendance, notwithstanding marked objective manifestations about the hock, had excluded that joint as the seat of the trouble; and, after failing in finding any lesion about the fetlock to explain the trouble, concluded that the coxo-femoral joint was the one affected. As, however, the lameness continued, a consultation was demanded. The consulting veterinarian had no hesitation and made the horse lame in the hock with osteo-arthritis. Notwithstanding this opinion, the attending veterinarian did not accept the verdict, but at the same time applied a blister on the hip, the fetlock and the hock. The animal was in great agony, and soon lost her flesh and good appearance. Her condition was such that she was brought to the clinic of the Milan Vet-

erinary School, where to convince the unbelieving veterinarian an injection of cocaine was made alongside the tracts of the sciatic and peroneal nerves, with the result that in about twenty minutes the lameness subsided. It was very interesting, says the author, to watch the appearance and countenance of the horse, which, relieved of its suffering, seemed quite happy at such rapid and unexpected relief. The animal was fired, and after a month was quite free from lameness. However, the mare never recovered her condition—(*Clinica Veterinaria*.)

PUERPURAL COLLAPBUS—RELAPSE—POST-PARTUM COMPLICATIONS [*Dr. G. Gazzaniga*].—This case is not related to show the already well known effects in the treatment of such affection by the insufflation of air, but for the complication which followed. A milk cow, in excellent condition, had delivered for a second time in a natural way, 36 hours before. When she first lost appetite, her milk secretion stopped. She was found in the morning lying down in a comatose state. Called immediately, the author resorted to the treatment of blowing air into the udder, and three hours later the cow was up, ruminating, and the next morning was apparently cured, nursing her calf. Ten days later Dr. G. heard that the cow was well, when, six days later, the symptoms returned. The animal had no appetite, no milk, and so weak that she threatened to fall. The hindquarters were like paralyzed; it required two men to hold her and prevent her from falling. Insufflation of air was again resorted to. After a few minutes the cow was eating; her temperature had gone up from 37 to 38.5 degrees. She was considered convalescent when the author thought to see her walk. He then observed that she could go well in a straight direction, but that it was impossible for her to turn around. Brought to the stable, she laid down, and when called again to rise and move she manifested a loss of coördination in her movements. Alcoholic friction on the dorso-lumbar region, subcutaneous injection of sulphate of strychnine, were prescribed and recovery followed.—(*Clinica Veterinaria*.)

FRACTURE OF THE BASE OF THE CRANIUM [*Dr. Pietro Ghisleni*].—From the series of articles published by the author on the above subject, the following interesting case is resumed: Five-year-old mare, led out of the stable and harnessed, reared and fell heavily backwards, striking the ground on the right side of the poll. She made several attempts to get up, but failed, and in each effort struck the right side of the cranium violently. All attempts to raise her failed; she would not

stand up. When visited by the author she was lying flat on the left side, without moving, in a most marked comatose condition—eyes closed, cornea and superfcy of the body insensible; hæmorrhage from both nostrils and right auditory canal; saliva bloody; respiration trembling and with râles, about 23 per minute; pulse full, intermittent and frequent, 51; temperature 37.6° C. Cutaneous excoriations on the parotid region and at base of left ear and at temporo-maxillary region. Buccal membrane pale, conjunctiva congested. Diagnosis of fracture of cranium was advanced, and fatal prognosis expressed. Owner wanted all possible efforts made to save her, and wanted treatment. After several days, however, the symptoms assumed a more severe aspect; nasal hæmorrhage continued, respiration became stertorous, pulse dropped to 30, temperature to 36° later to $35.8-35.3^{\circ}$ C., and finally after 43 hours of pain the poor brute died. Nothing abnormal was found on post-mortem in any of the thoracic or abdominal organs. The lesions were about the cranial cavity, and consisted of: (1) in a fracture of the basillar process running *en bec de flute* obliquely from the left condyloid foramen to reach on the right the body of the sphenoid, at the occipito-spheno-temporal hyatus; (2) a complete semicircular fracture of the occipital bone on the left side, from the condyloid foramen to the foramen lacerum of the same side; (3) a fracture involving the right postero-lateral portion of the orbital process; (4) a comminuted fracture of the tuberos portion of the right temporal bone. Of course, with such extensive lesions, the contents of the cranial cavity, the meninges and the encephalic mass, were highly congested and surrounded more or less with clots of blood resulting from the hæmorrhage.—(*Clinica Veterinaria*.)

PHENIC ACID IN THE TREATMENT OF TETANUS.—M. Capobianco, in the *Giornale della Societa Veterinaria Italiano*, relates a case of recovery in a mule by hypodermic injections of phenic acid in aqueous solution. The patient received on the first day, in the morning, 30 centigrammes, and in the evening 1 gramme of the solution at 3 per cent. Second day he had 1.5 gramme twice a day. Third day 2 grammes morning and evening. On the fourth day improvement was manifest; trismus diminished by degrees and horse eat oats. Injections were kept up to the thirteenth day, but doses gradually reduced. This result confirms those already obtained by Prof. Brusasco. Mr. S. Scandaliato, in the same journal, has in a clinical note, recorded several cases of recovery by the same

treatment. He relates a very severe case, complicated with pneumonia, which lasted 23 days, recovery being due to the acid treatment. The animal received first 2 grammes, and the dose was slowly increased until he had 7 grammes a day. Altogether he received 90 grammes of the acid during his sickness.

BIBLIOGRAPHY.

TEXT BOOK OF VETERINARY MEDICINE. By James Law, F. R. C. V. S., Director of the New York State Veterinary College. Vol. II, III, and IV. Second Edition. Revised and enlarged. Ithaca: Published by the author.

Following closely upon the issuance of the second edition of Volume I, Prof. Law has brought out another edition of the three succeeding volumes of his well-received text book, which covers the entire subject of veterinary medicine. He has not been content to simply supply the demand for more copies by running off another edition, but the latest volumes show a very careful revision of a majority of the subjects, in some instances amounting to a complete rewriting of them, while certain subjects have been added.

The REVIEW very heartily endorsed Prof. Law's work when it made its initial bow to the profession, and in its present form it is considerably enhanced in value by the injection of deliberate improvements which have suggested themselves to the author from time to time during the interval of editions. It would appear that nothing has been omitted, for by testing it as a reference book one will always be able to find in scrupulous detail almost any subject in the vast field of veterinary pathology.

Therefore, it is indispensable to the American veterinarian's library.

COST OF MAINTAINING AN AUTOMOBILE.—The New York *Herald* of Aug. 12 quotes two owners of high-priced automobiles in the matter of the cost of maintaining them. One estimates that for each mile his machine travels it costs 90 cents. Accurate accounts kept for one year showed that it required \$400 per month to indulge in the luxury. The second automobilist gave \$4000 in round numbers as the amount he had expended upon his \$5000 bubble during the past year. When it is asserted that they cost no more than horses, the hero of the assertion has probably never had to foot the bills.

OBITUARY.

EVAN D. ROBERTS, M. D. C.

We regret very much to announce the altogether unexpected death of this prominent veterinarian, which occurred at the Lake Side Hospital, Chicago, Aug. 4, following what was considered a trivial operation for an old but small ventral hernia, which could just as well have been left alone, as it was harmless. Soon after coming from under the influence of the anæsthetic he felt that everything was not right at the seat of operation, and wrote instructions for his burial in case he did not survive. The day following the operation he vomited fæcal matter, when the wound was reopened, but it was said that everything was right, save for a little peritonitis, but he grew rapidly worse, and was dead in another twenty-four hours.

Dr. Roberts was born in Caledonia, Racine County, Wis., Jan. 17, 1862, graduating from the Chicago Veterinary College in 1888, and for a time was assistant to Dr. Joseph Hughes. He then located at Janesville, Wis., where he conducted a successful practice until 1900, when he was appointed State Veterinarian by Gov. La Follette, being reappointed in 1904, which office he held at the time of his death. He was a member of the Wisconsin Society of Veterinary Graduates, which passed resolutions of respect to his memory at its meeting in La Crosse Aug. 8 and 9. He was instrumental in the establishment of the Wisconsin Live Stock Sanitary Board, of which he was also a member.

EXPERIENCE WITH VON BEHRING'S METHOD OF PROTECTIVE VACCINATION OF CATTLE AGAINST TUBERCULOSIS.—Schricker (*Wochenschr. Tierheilk. u. Viehzucht*, 50 (1906), No. 7, pp. 121-128).—Von Behring's method of vaccination against tuberculosis has been in practical use for 3 years and the results obtained, therefore, give a good foundation for judging its effectiveness. The author vaccinated 76 animals by this method without any bad effects, and no evidences of live tubercle bacilli were found in any of the animals which were subsequently killed and examined. It is concluded, therefore, that a protective vaccination of calves under four months of age is capable of greatly increasing the resisting power toward tuberculosis and in some cases checks slightly the development of an infection already existing at the time of vaccination.

STRICTLY GERM PROOF.

By J. F. DEVINE, D. V. S., Goshen, N. Y.

The antiseptic baby and the prophylactic pup
Were playing in a garden when the bunny gamboled up.
They looked upon the creature with a loathing undisguised—
It wasn't disinfected, and it wasn't sterilized.

They said it was a microbe and a hot-bed of disease ;
They steamed it in a vapor of a thousand odd degrees ;
They froze it in a freezer that was cold as banished hope
And washed it in permanganate with carbolated soap.

In sulphuretted hydrogen they steeped its wiggly ears ;
They trimmed its frisky whiskers with a pair of hard-boiled shears ;
They donned their rubber mittens, and took it by the hand
And 'lected it a member of the fumigated band.

There's not a micrococcus in the garden where they play ;
They swim in pure iodoform a dozen times a day,
And each imbibes his rations from a hygienic cup—
The bunny and the baby and the prophylactic pup.

THE COUNTRY VET.

By J. W. ROBINSON, V. S., Coleharbor, N. D.

The day is cold, and dark, and dreary,
It rains, and the wind is never weary ;
A farmer calls for you to come,
You hesitate, you're blue, and glum.
" But hurry up ! Old Bossie's sick !
She's all swelled up, you must be quick ! "

Now for the ride you must prepare,
You open your grip, and look, and stare.
A trocar you see, but the probang's not there,
You look at the walls and prepare to swear :
" Such troubles I have no one can tell,
This veterinary business is surely h—l. "

You hitch up your horse with a feeling of pain,
And start on your ride through the drifting rain.
The road is all mud, and the wheels get thick,
You would surely turn back, but old Bossie's so sick.
So you keep going on till you reach the barn,
And the old man is there to tell you his yarn.

Old " Bossie " is down and can't get up,
All bloated and stiff like a " drowned pup. "

Her legs stick out straight, and her eyes look blue,
 You say to yourself: "It's up to you,"
 But you've lost your nerve and cannot lie
 So tell the old man that his cow will die.

The farmer looks down and thinks in the quiet,
 "If she'd a only made water she'd a been alright."
 "Well, what de ye want fer yer trip out here,
 Ye know most any price ud be purdy dear?"
 "Jest charge it ta me 'till I sell my grain,
 Something else el be sick and I'll call ye again."

You start back homeward, disgusted, tis true,
 And feel as though luck had turned upon you.
 As you plod along homeward you sit and think:
 "It's no wonder so many good fellows drink."
 I have heard tell of hardships, but there's nothing yet,
 Can equal the life of a country vet.

CORRESPONDENCE.

DR. ROBERTS' ARTICLE ON ABORTION IN COWS.

WATERFORD, WIS., Aug. 20, 1906.

Editors American Veterinary Review:

DEAR SIRs:—Criticism, properly exercised, is the corrigen-
 and adjuvant of all literature, and in its present rapid rise to
 prominence veterinary literature will most need its modifying
 influence. In the August number of the REVIEW, we note an
 article by Dr. Roberts on "Abortion in Cows." The article
 was read carefully, as a "cattle specialist" might be expected
 to shed some much needed light on this rather dark subject.
 Dr. Roberts says: "Abortion is due to a germ, and therefore
 infectious, and it can be easily proven by any one who wishes
 to make the experiment." Here is an excellent suggestion for
 experiment stations—hardly practicable for conscientious prac-
 titioners.

He states that "a cow having become infected will abort
 the usual number of times and then become immune." Would
 it not have been well to have had some well authenticated data
 attached to that assertion? He further intimates that "a cow,
 if isolated and given prompt treatment as soon as the symptoms
 of abortion . . . manifest themselves," may soon be returned to
 the herd in a healthy condition. Friedberger and Fröhner
 state that, once started, it is impossible to prevent an abortion.
 The entire article rings with optimistic assertions regarding

the curability of the disease. We suggest that the profession be allowed to note down the formula of Dr. Roberts' anti-abortion serum so extensively advertised on the fences and barns of Wisconsin.

As to the *bona fide* reliable information contained in the Doctor's essay, it can be gleaned from clearer compositions by our standard authors. However, it must not be inferred that the article is entirely useless. It gives Dr. Roberts a standing with the profession in spite of the obnoxious "Vet. Rem. Co." branch of his practice.

J. W. MOYLE, D. V. S.

REGISTRATION IN MASSACHUSETTS.

GLOUCESTER, Aug. 12, 1906.

Editors American Veterinary Review:

DEAR SIR:—I wish to notify you that on July 21st, 1906, the following amendments to the law which established a Board of Registration in Veterinary Medicine in Massachusetts, went into effect. They are in synopsis, that the Board shall have the power to investigate all complaints, that recompense would be given to the executive officer of the Board to investigate these complaints; that the application fee for examination be increased from \$5 to \$15, and that the Board be given the explicit power to revoke and annul certificates under certain conditions.

I send you this as an item of interest to the readers of the REVIEW. Yours truly, E. W. BABSON, *Secretary*.

"THE REVIEW is constantly enlarging, and I will never be without it while I can raise the subscription price."—(E. M. Bronson, *Secretary Indiana V. M. A., Indianapolis, Ind.*)

ON his way to the Transvaal, Dr. Aquila Mitchell, graduate of the A. V. C., class 1895, called on Dr. Liautard and passed with him a pleasant hour talking over old 54th Street times.

DR. MARK WHITE, Denver, Col., is editor of the dog department of a monthly journal called *Dogs and Cats*, published at Denver. He has an article in the July number on "Hydrophobia or Rabies."

THE INDIANA VETERINARY COLLEGE, Indianapolis, Indiana, under date of July 21, requested us to send a copy of the latest REVIEW to be placed in the corner stone of its new building. It was forwarded, and we herewith offer our congratulations.

SOCIETY MEETINGS.

AMERICAN VETERINARY MEDICAL ASSOCIATION.

The 43d annual meeting was called to order by the President, Dr. William Herbert Lowe, at 10.30 A. M., in the large assembly room of Harmony Hall, New Haven, Conn., Tuesday, Aug. 21, 1906, at which hour there was a very large number of members, ladies and visiting veterinarians present.

At the fall of the gavel the President announced that the session was formally open for the transaction of business, and then introduced Mayor John B. Studley, of New Haven, who welcomed the veterinarians to the Elm City. The Mayor delivered an address occupying about twenty minutes, which consisted of a brief but comprehensive history of the city and of its great educational institution, together with its enviable position in the industrial world. While these points were detailed with evident pride and in an entertaining manner, the Mayor's remarks were delightfully interspersed with anecdotes and with many evidences of being in possession of much "horse sense." In fact, he pleaded with the veterinarians engaged in research work to look diligently for the microbe of what he termed horse sense, and if found they should endeavor to have it inoculated into the human animal, for his permanent improvement. The Mayor was most attentively listened to and was roundly applauded when he declared that New Haven's pride, Yale University, would never be a complete educational institution until a department of comparative medicine was added to its curriculum.

At the completion of the Mayor's address, the President called upon Dr. J. G. Rutherford, Veterinary Director-General and Live Stock Commissioner of the Dominion of Canada, Vice-President of the A. V. M. A., to respond to His Honor's welcome to the Association, and it is needless for the REVIEW to tell those who know the gifted son of Scotland that he covered himself with glory and made the walls echo with applause when he had completed his wise and witty acknowledgment of the Association's sense of appreciation of the honor conferred upon it. Altogether the opening of the meeting was a most pleasant and profitable event, and made a splendid curtain-raiser for the greatest convention of veterinarians from all over this continent and the dependencies that was ever held on this soil, and, in our humble judgment, is second only to the great international

congresses of veterinary medicine which have occurred in Budapest and in Baden Baden.

Having cleared the field for action, the President began the reading of his annual address, which was as follows :

PRESIDENT LOWE'S ADDRESS.

"Fellow-Members of the American Veterinary Medical Association :

"I think that, without exception, there never has been a time in America that has been fraught with interest of such vast proportions and far-reaching results to the veterinary profession than during my incumbency in the presidency of the American Veterinary Medical Association. The profession has sustained losses, as is always the case in great struggles, but the gain and advancement has been phenomenal and will without doubt place the veterinary profession, in the United States at least, in the very front rank in the matter of veterinary sanitation and the inspection of animal food products.

"The gross exaggeration of facts and conditions, misrepresentation and sensationalism that we have passed through during the last few months in this country is simply abominable and has shocked the whole civilized world. As a consequence the financial loss to this country in exports of animal food products has been enormous and almost beyond human comprehension.

"This is the cost of the recent agitation of packing house conditions and practices, but if the new meat inspection law and the new pure food law accomplish what they purport to do it will not be long until the quality, soundness, healthfulness, and wholesomeness of our food products will be above suspicion and public confidence restored at home and abroad.

"The retirement of Doctor Daniel Elmer Salmon, former President of this Association, from the important position of Chief of the United States Bureau of Animal Industry at Washington is a great loss to agricultural and live-stock interests from an international as well as from a national point of view. Dr. Salmon contributed much to science besides the control and extermination of animal plagues. The fact that he established and organized a bureau that under his guidance and directorship had grown, in the short period of twenty-one years, to be the largest and the most important of its kind in the world, a monument to his name, and a credit to his profession, which will be imperishable while the government at Washington stands and veterinary science and art are extant.

"As the executive of the American Veterinary Medical Association I recommend that this Association take suitable action expressive of the great work at Washington of former President Daniel Elmer Salmon in behalf of his government, veterinary science and mankind, and that an engrossed copy of such testimonial of his work and worth be prepared and presented to Dr. Salmon by a committee of this Association.

"While we regret the retirement of Dr. Salmon, we are delighted that another honored member of this Association has been found worthy and capable to be promoted to fill the position of Chief of the United States Bureau of Animal Industry.

"At the time of the retirement of Dr. Salmon it was thought by the administration at Washington that it might be best to select a man not connected with the administration of bureau affairs, and Dr. A. D. Melvin, assistant chief, was temporarily placed in charge pending the decision of the Secretary of Agriculture.

"Secretary Wilson expressed a desire to have an expression from this Association as to the qualifications of the man to be appointed. Your President thought it wise to exercise his prerogative and called a special meeting of the Executive Committee in Philadelphia, Pa., Oct. 25th, last. At this meeting the names of five members of the Association (Dalrymple, Melvin, William Herbert Lowe, Lyman and Pearson) were nominated by the committee. It was ordered that these five names were to be submitted to the members of the Association resident in the United States for their choice, but that members were not to be restricted to these five names in voting, and that the names of the three members receiving the largest number of votes were to be submitted to Secretary Wilson, from whom he might make his selection. There was an unexplained delay on the part of the sub-committee having this matter in charge. Dr. Melvin in the meantime displayed admirable executive ability, and exercised good judgment in the administration of bureau affairs to the satisfaction of Secretary Wilson and everybody concerned whereupon the Secretary promoted him to be the Chief of the Bureau of Animal Industry.

"Dr. Melvin by reason of his long experience in bureau affairs, his extensive knowledge of the live stock business and meat inspection, his personal acquaintanceship with those in the trade and those in the Bureau from the lowest to the highest, the high esteem in which he was held by everybody connected with the service were some of the reasons why he was

entitled to promotion and why Secretary Wilson made the appointment.

"I appeal to every loyal member of this Association, with all the earnestness within me, to support our new chief in every way possible. He has had a strenuous time and arduous and great duties to perform since his appointment. The success of his administration will depend in no small degree upon the support the veterinary profession gives him. I would approve of some action being taken by this Association congratulating him on the work he has already accomplished and pledging him our support as the representative organization of America.

"Dr. Melvin's elevation to the head of the service made possible the advancement of other worthy and capable men long in the service of the bureau, my predecessor as United States veterinary officer of the Port of New York and superintendent of the animal quarantine station for said port, Dr. A. M. Farrington, being promoted to the second highest office in the bureau, that of assistant chief.

"While meat and pure food legislation has been enacted by the United States Congress and while some excellent laws for the regulation of veterinary practice and of veterinary sanitary control work have been placed upon the statute books of a number of states since our last annual meeting, yet I regret that the Committee on Army Legislation has been unable to obtain the legislation asked for the promotion of the efficiency of the veterinary service in the United States Army. This class of work cannot be done at long range. When the time comes to push the Army Bill again, this Association should have a committee constantly at Washington to take care of the measure and to see that it gets a chance to see daylight. A committee running down to Washington at night and rushing back the following night cannot properly and effectively take care of a pending measure. The work of this committee should not be limited to army legislation, therefore I recommend that the by-laws be amended so as to increase its scope to include all legislation favorable or inimicable to veterinary interests and advancement, whether at Washington, Ottawa or other capital city.

"I have official advice that our esteemed fellow-member, Dr. Charles H. Jewell, Thirteenth Cavalry, United States Army, stationed at Fort Riley, Kansas, has been sent by the War Department as a representative of the army veterinarians to this meeting. At the proper time we shall be pleased to listen to what he has to say to us on 'The Veterinary Service

of the United States Army and the Military Veterinarian.'

"It is probable that at this meeting we will learn something at least of the best thought and work of the old world as well as of the new, for this Association was represented at the Eighth International Veterinary Medical Congress at Budapest, and at the Tuberculosis Congress at Paris, by a number of her brightest minds. The A. V. M. A. was also represented at the unveiling of the Nocard monument at Alfort by two of her oldest and most esteemed members.

"There is no work that this Association has taken part in that is more important than that of veterinary education. Much has been accomplished during the last few years in raising the standard of veterinary education on this continent, but there is much room for improvement in some of the schools at least.

"Uniform matriculation requirements, uniform curricula, uniform degree upon graduation, uniform state requirements for license to practice and interchangeable state licenses, where the requirements will permit of it, are some of the problems to be met by the Association of Veterinary Faculties and Examining Boards. The reorganization of this body last year at Cleveland was a great step in the right direction and I believe that as now constituted, with three members from the colleges, three from the examining boards and three from this Association, it ought to have a harmonizing and strengthening influence.

"There ought, in my opinion, to be some state control over matriculation in every state as well as over graduation and licensing of veterinarians to practice, because students are constantly being matriculated in our colleges who do not possess the proper fundamental education nor are adapted for the veterinary profession, or who have not the brains to make successful veterinarians. No profession can advance as it should unless the best kind of men are attracted to it. The time to stop a candidate is at the time of matriculation and not at graduation or when he seeks a license to practice his profession. If the state makes the requirements for matriculation of the veterinary student, as it has done for license to practice this and other professions, the problem is solved.

"The future of the veterinary profession does not depend upon 'the coming of the automobile' or 'the passing of the horse,' but it does depend, and always will depend, upon the ability, adaptability, character and purpose of the young man who knocks at the college door for matriculation. Our code of ethics is a very nice thing, and I believe in a code of ethics as

much as any one, yet it amounts to nothing, and is no deeper than veneer, unless behind ethical conduct there is character, principle and a high purpose.

"The suggestion to establish a veterinary college at the Union Stock Yards, Chicago, where men may be thoroughly qualified to inspect meats on the hoof and in the carcass, a school where all diseases, common and uncommon, among domesticated animals may be exhibited in the clinics and where students may obtain an education in animal husbandry ought to awaken educators to the pressing demand of the hour. The *Breeder's Gazette* declares that 'a world's trade is at stake' and that we must have 'a school commensurate with the needs of the whole round globe.' All I have to say is that if any of the veterinary schools of this country are not educating and training men along lines that will fit them for this very kind of work it is a sad commentary upon their work and it is high time that their faculties revise their curricula and methods of teaching and training to conform to the demand of the times.

"There should be some supervision over the colleges to see that they carry out what they announce in their catalogues and to see that the faculties and trustees of the colleges require and insist upon actual attendance of students during the full period for which they are accredited in conformity with the laws of many of our states.

"One of the factors that has materially retarded the work of veterinary educators in this country has been the lack of funds to erect, equip and maintain veterinary colleges adequate to the requirements of the times. Through the sagacity of Dr. Leonard Pearson, the University of Pennsylvania gets \$250,000 towards veterinary education.

"I can leave the subject of veterinary education with safety, since it is to receive its full share of attention at this meeting. Dr. Leonard Pearson, Dean of the Veterinary Department of the University of Pennsylvania, will give us an account of 'The Veterinary Schools of Europe,' and Dr. D. S. White, Dean of the Veterinary Department of the Ohio State University, will present a paper on 'Veterinary Education in the United states.'

"There never was as great an opportunity for the veterinarian as there is to-day. There are not enough qualified men to fill the more important professional positions and the deplorable thing about this is these places are being filled by medical men and others who have not had adequate training in compar-

ative medicine and who know nothing about animal husbandry. I do not believe that such a situation exists in any other profession in America to-day. It will be many years before the supply equals the demand. It may become crowded for those who are at the bottom of the ladder, especially for those who in large cities and in residential sections confine themselves to equine practice, but where the automobile displaces carriage horses there will be other avenues opened for the qualified veterinary practitioner.

"There is no community that does not need the services of the qualified veterinarian in municipal, board of health, meat and milk inspection and sanitary work.

"There are places in hundreds of towns and cities for qualified veterinarians as meat and milk inspectors. There should be at least one qualified veterinarian connected with the board of agriculture and with the board of health of every state. Veterinary work should be under veterinary direction in state as well as national government. Qualified veterinarians are needed in agricultural colleges and experimental stations and I venture to predict that it will not be many years before all recognized schools of human medicine will include a chair of veterinary science in their curriculum. There should be a veterinary hospital and laboratory connected with every school of human medicine.

"A small army of qualified veterinarians are urgently needed at the present hour in the meat inspection service of the United States Bureau of Animal Industry.

"I believe that one of the greatest factors for the advancement of the veterinary profession is well edited journalism. When the United States Veterinary Medical Association founded the AMERICAN VETERINARY REVIEW it did better than it knew, for this journal under its present able management has grown in volume, power and favor until it is indispensable in a veterinarian's library or office if he wants to keep in touch with the advance work of the profession at home and abroad. The REVIEW is as essential to the veterinarian, if he wishes to keep abreast of the times, as the trolley is to the locomotion of the trolley car.

"There is an article in our by-laws that does not altogether suit me. I refer to the article establishing an honor roll. I would have had the condition of enrollment on the honor roll *achievement* rather than the length of membership in the Association. One member might do more for the advancement of

science and the profession in one year than another would or could do in his natural life time. It is the men who do things that should be honored. It may be a man who through his investigations and experimentations contributes in the way of a discovery something of great benefit to science and mankind; it may be a man who obtains an important piece of legislation for the profession; it may be a man who in the administration of official office elevates the standard or extends the scope of the profession; it may be a man who contributes to veterinary literature or it may be a man who contributes in some other way more than his fellows to the advancement of our science and art.

"I therefore recommend that this article be amended so as to make the condition of enrollment achievement instead of length of membership, or that an amendment be adopted creating a degree of F. A. V. M. A. (Fellow of the A. V. M. A.). This degree to be conferred only upon those who have rendered some conspicuous service for the benefit and advancement of veterinary science and art, and who have been recommended for such conspicuous service by a majority of the living past presidents of the A. V. M. A.

"Soon after my election I made a special effort to increase the membership of the A. V. M. A. Through the office of the Secretary in Philadelphia, the Resident State Secretary in every state and province on the continent was asked to use his best efforts and influence to obtain all the worthy material possible so that the work of the Association might go forward with a might that would be irresistible. It is a disappointment to me that only fifty-five applications have been filed in the Secretary's office up to the date of this meeting.

"My opinion has changed somewhat in regard to the way members should be elected to the American Veterinary Medical Association. I have come to believe that it might be best to have the constituency of membership of this international organization representative in character. Let each state and provincial veterinary association send representatives to the annual sessions of the A. V. M. A. according to the membership of the local organizations. It would be considered a great honor to be sent by the profession of one's state or province to represent the profession in the councils of the A. V. M. A.

"Leaders would naturally be chosen, and those who displayed ability, worked for the profession and obtained the best results would be continued in membership and those who did

not give satisfaction to the profession at home would soon be retired and others chosen to take their places. I would recommend that a committee be appointed to look into this proposition as to membership; to ascertain how the members of international and national organizations of other professions are chosen; to study the subject from every standpoint and make their report and recommendations at our next annual meeting.

"The American Veterinary Medical Association is proud that again a veterinarian through distinguished professional attainments has been rewarded with the honor of knighthood. I refer to Prof. John McFadyean, Principal of the Royal Veterinary College, London, who was knighted by King Edward VII on the occasion of the birthday of the latter on Nov. 9 last. Honor conferred on an individual member of a profession necessarily reflects credit on the profession of which the recipient of such an honor is a member. In bestowing this honor upon one of the members of the veterinary profession, King Edward has not only honored the entire profession, but has publicly given acknowledgment of the importance of veterinary science to mankind. In behalf of the A. V. M. A. I congratulate Sir John, wishing him a long life of happiness and usefulness in behalf of veterinary science.

"It is passing strange that although the health and wealth of the people depends in an essential and fundamental way upon an intelligent application of veterinary science and art, that the scope, nature, character and importance of animal experimentation, investigation, study, research and work of the veterinarian in general has upon sanitary science and preventive medicine that the American people have been so slow in affording the veterinary profession an opportunity at least equal to the other learned professions for growth and development.

"To cure disease is what is constantly asked of the physician. This is mere repair work. It is like patching up a leaky boiler. It is necessary, no one doubts that; but from a more advanced point of view, its place is restricted. It should no longer be the all important thing. A fundamental and much larger work is that of prevention of disease, which is of paramount importance if the vitality of the human race is to be maintained and strengthened. Many of the diseases of man would not occur at all if there was a proper application of veterinary science and art.

"It would be considered presumption among enlightened

people to define the profession of law, human medicine or theology, yet how many of this class of people in America to-day have a comprehensive and proper conception of the essential, fundamental and vital importance of veterinary science that protects human health and life from invasions of disease as well as fosters and safeguards our vast agricultural wealth, which means so much from an economic and financial standpoint to the people of this American continent and of the entire world."

At the conclusion of the President's address Dr. Lowe was warmly praised for the great study which he had evidently given to the needs of the profession, as his remarks were pregnant with suggestions looking to the uplifting and safeguarding of its interests. The document was referred to the incoming Executive Committee, with instructions to take up the various recommendations which it contains, and to report upon them *seriatim* at the convention of 1907.

As has been the custom for many years, reading of the minutes was dispensed with, and was substituted by the presentation by the Secretary of the printed volume issued by the Association to its members.

The calling of the roll was likewise dispensed with, the attendance being ascertained by the card system of registration, from which the REVIEW has compiled the following list:

THOSE IN ATTENDANCE.

Members.

Canada.—M. C. Baker, Montreal; A. W. Harris, Chas. H. Higgins, J. G. Rutherford, Ottawa; Thomas Thacker, Renfrew.

Colorado.—Chas. G. Lamb, Denver.

Connecticut.—C. L. Adams, Danielson; Thomas Bland, Waterbury; F. F. Bushnell, Middletown; Chas. L. Colton, Hartford; A. C. Knapp, Bridgeport; G. W. Loveland, Torrington; Richard P. Lyman, Hartford; R. D. Martin and F. W. McLellan, Bridgeport; E. H. Morris, Derby; Edward C. Ross, New Haven; H. L. Torrer, Norwich; George V. Towne, Thompson; C. R. Witte, New Britain.

Cuba.—Nelson S. Mayo, Santiago de las Vegas.

District of Columbia.—John R. Mohler and E. V. Wilcox, Washington.

Florida.—J. G. Hill, Jacksonville.

Hawaii.—W. T. Monsarrat, Honolulu.

Illinois.—A. W. Baker, Joseph Hughes, L. A. Merillat,

James Robertson, John F. Ryan, C. A. White, Chicago ; A. M. Wray, Richmond.

Indiana.—J. W. Klotz, Noblesville ; J. R. Mitchell, Evansville ; G. H. Roberts, Indianapolis.

Iowa.—J. H. McNeil, Ames ; C. E. Stewart, Chariton.

Kansas.—Chas. H. Jewell, Fort Riley.

Kentucky.—D. A. Piatt, Lexington.

Louisiana.—W. H. Dalrymple, Baton Rouge ; M. M. White, Shreveport.

Maine.—George F. Wescott, Portland.

Maryland.—Wm. Dougherty, F. H. Mackie, G. A. Jarman, Baltimore.

Massachusetts.—Francis Abele, Quincy ; H. D. Clark, Fitchburg ; W. H. Dodge, Leominster ; Daniel Emerson, Boston ; H. B. Hamilton, New Bedford ; L. H. Howard, Boston ; Harry Lukes, Springfield ; James B. Paige, Amherst ; C. H. Perry, Worcester ; Austin Peters, Boston ; J. G. Pfusick, Greenfield ; C. W. Playdon, Reading ; Benj. D. Pierce, Springfield ; J. H. Roberts, Northampton ; C. R. Simpson, Boston ; Wm. T. White, Newtonville ; J. F. Winchester, Lawrence ; Charles Winslow, Rockland.

Minnesota.—Charles E. Cotton, C. C. Lyford, Minneapolis ; M. H. Reynolds, St. Anthony Park ; S. H. Ward, St. Paul.

Mississippi.—E. M. Ranck, Natchez.

Missouri.—B. F. Kaupp, R. C. Moore, S. Stewart, Kansas City.

Nebraska.—Richard Ebbitt, Grand Island ; H. Jenson, Weeping Water ; Charles A. McKim, A. T. Peters, Lincoln.

New Brunswick.—D. McCuiag, Moncton.

New Hampshire.—Lemuel Pope, Jr., Portsmouth.

New Jersey.—T. Earle Budd, Orange ; J. Wm. Fink, Arlington ; J. T. Glennon, Newark ; S. G. Hendren, Arlington ; John B. Hopper, Ridgewood ; John V. Laddey, Morristown ; E. L. Loblein, New Brunswick ; J. Payne Lowe, Passaic ; Wm. Herbert Lowe, Paterson ; Thomas E. Smith, Jersey City ; L. E. Tuttle, Bernardsville, Geo. B. Vleit, Hackettstown.

New York.—E. B. Ackerman, Roscoe R. Bell, George H. Berns, Brooklyn ; W. Reid Blair, C. E. Clayton, N. Y. City ; J. F. DeVine, Goshen ; Robert W. Ellis, N. Y. City ; P. A. Fish, Ithaca ; Otto Faust, Poughkeepsie ; H. D. Gill, F. C. Grenside, N. Y. City ; Elisha Hanshew, Brooklyn ; H. D. Hanson, Thomas J. Herr, N. Y. City ; W. G. Hollingworth, Utica ; Wilson Huff, Rome ; Wm. Henry Kelly, Albany ; G. A.

Knapp, Millbrook ; James Law, Ithaca ; R. W. McCully, J. L. Robertson, Thomas G. Sherwood, N. Y. City ; Clarence E. Shaw, Brooklyn ; M. C. Thompson, Bangall ; W. J. Taylor, Ithaca ; A. J. Tuxill, Auburn ; H. N. Waller, N. Y. City ; L. R. Webber, Rochester ; W. L. Williams, Ithaca.

North Carolina.—Tait Butler, Raleigh.

Ohio.—Eugene Burget, Wadsworth ; A. S. Cooley, Cleveland ; T. B. Hillock, Columbus ; John V. Newton, Toledo ; E. H. Shepard, Cleveland.

Pennsylvania.—F. J. Allen, H. P. Brooks, S. J. J. Harger, Philadelphia ; Jacob Helmer, Scranton ; W. Horace Hoskins, C. J. Marshall, Philadelphia ; Otto Noack, Reading ; E. C. Porter, New Castle ; E. W. Powell, Bryn Mawr ; John J. Repp, Philadelphia ; W. H. Ridge, Trevoise ; F. H. Schneider, Philadelphia ; S. E. Weber, Lancaster ; W. E. Wight, Pittsburgh.

Rhode Island.—T. E. Robinson, Westerly.

South Carolina.—Louis Friedheim, Rock Hill.

Tennessee.—George R. White, Nashville.

Vermont.—Robert Weir, Rutland—(144).

Visiting Veterinarians.

Alabama.—T. H. Saul, Montgomery.

Connecticut.—Frank G. Atwood, New Haven ; H. C. Balzer, Meriden ; Harry E. Bates, South Norwalk ; E. M. Beckley, Meriden ; G. E. Corwin, Jr., Canaan ; Geo. F. Crowley, B. K. Dow, Willimantic ; G. F. Elliott, Bristol ; H. H. Ferr, Litchfield ; Wm. Foster, Waterbury ; Geo. H. Hoey, New Haven ; Lewis B. Judson, Winsted ; V. M. Knapp, Danbury ; James F. Laden, New Haven ; Albert Long, New Haven ; F. D. Monell, Derby ; Geo. F. McGuire, New Britain ; W. S. Plaskett, Clinton ; J. S. Schofield, E. F. Schofield, Greenwich ; W. M. Simpson, Meriden ; W. J. Southey, Bridgeport ; R. S. Todd, New Milford ; L. J. Turner, Winsted ; J. E. Underhill, New London ; W. F. Vail, Greenwich.

District of Columbia.—J. D. Robinson, Washington.

Illinois.—F. H. Davis, Chicago.

Massachusetts.—Frank J. Babbitt, Lynn ; W. P. Barnes, Dewiesport ; Frederick Chaffee, Pittsfield ; F. D. London, Great Barrington ; R. J. Marshall, Williamstown ; W. J. Meloche, Spencer ; A. A. McDonell, North Adams ; L. H. Paquin, Webster ; Harrie W. Peirce, Medford ; W. T. Pugh, Southbridge ; J. W. Robinson, Natick ; G. W. Stanbridge, Winchendon ; Jesse A. Viles, Lowell ; Samuel F. Wadsworth, Boston.

Michigan.—W. N. Armstrong, Concord.

Missouri.—W. C. McPherson, Kansas City; C. N. Scott, Mound City.

Nebraska.—Peter Simonson, Fremont; E. F. Stewart, Beatrice; W. E. von Nordheim, Wahoo.

New Hampshire.—C. E. Berchsted, Concord; F. L. Bodwell, Dover; G. E. Chesley, Rochester; A. L. Dodge, Manchester.

New Jersey.—S. Lockwood, Woodbridge; Jas. McDonough, Montclair; Werner Runge, Newark; S. C. Tremaine, Bridgeton.

New York.—F. W. Andrews, Mt. Kisco; A. W. Baker, Oneonto; J. L. Delaney, Millerton; J. R. Hammond, Port Jefferson; A. H. Ide, Lowville; T. F. Krey, N. Y. City; Geo. W. Meyer, N. Y. City; R. A. McAuslin, L. McLean, W. J. McKinney, Brooklyn; Richard R. Morrison, White Plains; J. H. Phelan, N. Y. City.

Ohio.—Louis P. Cook, Cincinnati; P. A. Dillihunt, Springfield.

Pennsylvania.—Harry E. Bender, Lititz; Frank U. Fernsler, Lebanon; R. L. Kann, Mechanicsburg; J. F. Olweiler, Elizabethtown; W. B. Protheri, Johnstown; Chas. A. Spicer, Caraopolis; A. W. Wier, Greenville.

Rhode Island.—L. T. Dunn, John A. McLaughlin, Providence.

Vermont.—H. H. Burgess, Bennington; F. C. Wilkinson, Bellows Falls.

Virginia.—R. R. Clark, Newport News.

West Virginia.—J. C. Callender, Parkersburg—(84).

Ladies.

Canada.—Mrs. C. H. Higgins, Ottawa; Miss A. Rutherford, Ottawa; Mrs. Thacker, Miss Thacker Renfrew.

Connecticut.—Mrs. Albert Long, New Haven; Mrs. Richard P. Lyman, Hartford; Mrs. Studley, New Haven; Mrs. F. F. Bushnell, Middletown; Mrs. G. W. Loveland, Torrington; Miss May Loveland, Torrington; Miss Caroline E. Hiller, New Haven; Mrs. C. L. Adams, Danielson; Miss Charlotte A. Hubbard, New Haven; Miss Rose Dimock, Mansfield Depot.

District of Columbia.—Mrs. J. D. Robinson, Washington.

Florida.—Mrs. H. M. Hill, Jacksonville.

Hawaii.—Mr. W. T. Monsarrat, Honolulu.

Illinois.—Mrs. C. A. White, Chicago; Mrs. A. H. Baker, Chicago; Mrs. Joseph Hughes, Chicago; Miss Helen R. Hughes, Chicago.

Indiana.—Mrs. J. R. Mitchell, Evansville.

Kentucky.—Mrs. S. J. Steele, Winchester.

Maryland.—Mrs. F. H. Machie, Baltimore ; Mrs. G. A. Jarman, Baltimore.

Massachusetts.—Miss M. J. Cooney, Springfield ; Miss Ruth Lukes, Springfield ; Mrs. Lukes, Springfield ; Mrs. Chas. H. Perry, Worcester ; Miss Mary B. Emerson, Lynn ; Mrs. B. F. Pierce, Springfield ; Mrs. Francis Abele, Quincy ; Mrs. W. T. Pugh, Southbridge ; Mrs. Simpson, Springfield ; Mrs. Charles R. Simpson, Boston.

Michigan.—Mrs. Harry E. States, Detroit ; Mrs. S. Brenton, Detroit ; Miss R. L. Brenton, Detroit.

Minnesota.—Miss S. E. Lyford, Minneapolis.

Missouri.—Mrs. B. F. Kaupp, Kansas City ; Miss Belle Stewart, Kansas City.

Mississippi.—Mrs. E. M. Ranck, Natchez.

Nebraska.—Mrs. H. Jensen, Weeping Water ; Mrs. A. T. Peters, Lincoln ; Mrs. C. A. McKim, Lincoln.

New Hampshire.—Mrs. C. E. Burchsted, Concord.

New Jersey.—Mrs. Wm. Herbert Lowe, Paterson ; Miss Dorcas A. Loblein, New Brunswick ; Mrs. S. C. Tremaine, Bridgeton ; Mrs. T. Earle Budd, Orange ; Mrs. Geo. B. Vleit, Hackettstown ; Mrs. John B. Hopper, Ridgewood, Mrs. W. Runge, Newark.

New York.—Mrs. D. L. McGrath, Rome ; Mrs. A. J. Tuxill, Auburn ; Miss Frances Dawley, West New Brighton ; Miss Nellie C. Berns, Brooklyn ; Mrs. Geo. H. Berns, Brooklyn ; Mrs. G. A. Knapp, Millbrook ; Mrs. W. H. Kelly, Albany ; Mrs. E. B. Ackerman, Brooklyn ; Mrs. Robert W. Ellis, N. Y. City ; Mrs. L. R. Webber, Rochester ; Mrs. H. D. Hanson, N. Y. City ; Mrs. W. L. Williams, Ithaca.

Ohio.—Mrs. P. A. Dillihunt, Springfield ; Miss Flora A. Cooley, Cleveland ; Mrs. T. B. Hillock, Columbus ; Mrs. A. S. Cooley, Cleveland ; Mrs. John V. Newton, Toledo ; Mrs. R. C. Hill, West Alexandria.

Pennsylvania.—Mrs. F. S. Allen, Philadelphia ; Mrs. W. H. Ridge, Trevoise ; Miss Mabetts B. Allen, Philadelphia ; Mrs. C. J. Marshall, Philadelphia ; Mrs. H. P. Brooks, Philadelphia ; Miss Margaret Hoskins, Philadelphia ; Mrs. Annie C. Wier, Greenville ; Miss Emma L. Brooks, Philadelphia ; Mrs. E. W. Powell, Bryn Mawr ; Mrs. Geo. F. Kamerer, Greenville ; Mrs. W. H. Hoskins, Philadelphia ; Mrs. F. H. Schneider, Philadelphia ; Mrs. W. E. Wight, Pittsburgh.

South Carolina.—Miss Carrie Friedheim, Rock Hill.

Vermont.—Miss Flora C. Burgess, Bennington ; Mrs. H. W. Burgess, Bennington.

West Virginia.—Mrs. J. C. Callender, Parkersburg—(88).

Other Visitors.

Canada.—A. Loir, M. D., Ottawa.

Connecticut.—Wm. H. Brewer, New Haven ; A. B. Clark, Beacon Falls ; John H. Gibbons, New Haven ; Arthur Andrews, Waterbury ; J. E. Watson, Marbledale ; Arthur Bissill, Litchfield ; J. Berliniche, New Haven ; D. W. Smith, Ansonia ; T. E. Donovan, Skelton ; Charles F. Roberts, New Haven ; George E. Tucker, New Haven ; F. S. Baches, Wallingford ; E. S. Peterson, New Haven ; G. Elliott, New Haven ; J. B. Studley, New Haven ; A. G. Capewell, New Haven ; W. S. Neale, New Haven ; Master C. L. Adams, Danielson ; A. W. Ranney, Hartford ; Cliff Bradley, New Haven ; H. O. Averill, Washington ; M. L. Carpenter, East Hampton ; Walter Holcomb, Torrington.

Hawaii.—Master Marcus R. Monsarrat, Honolulu.

Illinois.—V. E. Kovar, Chicago ; Master R. O. Hughes, Chicago ; Alex. Eger, Chicago.

Massachusetts.—Wm. Simpson, Springfield ; P. H. Gallaher, West Somerville ; Eli Gernwein, East Hampton ; Fairfield Whitney, Townsend ; Master Roger N. Perry, Worcester ; J. T. Bage, Springfield ; M. C. Keefe, Westfield.

Michigan.—Joseph Schwartz, Bay City ; Lester Carragan, Detroit ; C. N. Anderson, Detroit.

Minnesota.—C. D. Lyford, Minneapolis.

New Jersey.—B. F. King, Little Silver ; Master Miller N. Vleit, Hackettstown.

New York.—W. H. Ellwell, Walton ; J. W. Hanson, N. Y. City ; W. W. Williams, Ithaca ; Geo. P. Tabor, Dover ; J. C. Jenkins, N. Y. City ; Herman Belitz, N. Y. City ; W. N. Hav-
erstick, N. Y. City ; Master Bellmont Bell, Brooklyn ; Master Hollingsworth Bell, Brooklyn ; G. W. M. Moll, N. Y. City ; Master W. H. Kelly, Albany ; Wm. F. Kerchner, N. Y. City ; W. R. Patten, Jr., Brooklyn.

Ohio.—R. C. Hill, West Alexandria.

Pennsylvania.—H. P. Brooks, Philadelphia ; G. F. Kamerer, Greenville.

Rhode Island.—Charles T. Frey, River Point—(58).

NEW MEMBERS ELECTED.

Leon A. Paquin, D. V. S., McGill '98, Webster, Mass.

E. H. Morris, D. V. S., McGill '96, Derby, Conn.

- Jacob G. Pfersick, D. V. S., McGill '98, Greenfield, Mass.
 Chester L. Blakely, M. D. V., Harvard '98, Augusta, Me.
 Harrie W. Pierce, M. D. V., Harvard '00, Medford, Mass.
 William T. White, M. D. V., Harvard '97, Newtonville, Mass.
- E. W. Babson, M. D. V., Harvard '97, Gloucester, Mass.
 Albert C. Knapp, D. V. S., N. Y.-A. '04, Bridgeport, Conn.
 Wilbur J. Southey, D. V. S., N. Y.-A. '98, Bridgeport, Conn.
 James H. Kelley, V. S., N. Y.-A. '93, New Haven, Conn.
 Samuel S. Buckley, D. V. S., Maryland Ag. Col. '93, N. Y.-A. '96, College Park, Md.
- C. E. C. Atkins, D. V. S., N. Y.-A. '00, Bridgeport, Conn.
 George W. Meyer, D. V. S., N. Y.-A. '91, New York City.
 William Arthur Young, D. V. S., N. Y.-A. '00, Utica, N. Y.
 Robert J. Foster, D. V. M., N. Y. State '02, Fort Oglethorpe, Dodge, Ga.
- Valentine M. Knapp, D. V. M., N. Y. State '04, Danbury, Conn.
- Mulford C. Thompson, D. V. M., N. Y. State '05, Bangal, N. Y.
- Clarence E. Shaw, D. V. M., N. Y. State '01, Brooklyn, N. Y.
 Walter J. Taylor, D. V. M., N. Y. State '06, Forest Home, Ithaca, N. Y.
- F. W. Andrews, D. V. M., N. Y. State '05, Mt. Kisco, N. Y.
 C. R. Behler, M. D. C., Chicago '04, Nampa, Idaho.
 N. Elwood Neilson, M. D. C., Chicago '06, Chicago, Ill.
 Charles A. White, M. D. C., Chicago '94, Chicago, Ill.
 Wm. E. von Nordheim, M. D. C., Chicago '05, Wahoo, Neb.
 Charles Henry Beers, M. D. C., Chicago '06, Waterbury, Conn.
- Eldridge N. Brown, M. D. C., Chicago '06, Nashville, Tenn.
 F. C. Genside, V. S., Ontario '79, New York City.
 Theodore S. Rich, V. S., Ontario '91, Pueblo, Col.
 Russell A. Stephens, D. V. M., Cincinnati '03, National Stock Yards, Ill.
- E. S. Deubler, V. M. D., U. P. '05, Philadelphia, Pa.
 John Reichel, V. M. D., U. P. '06, Philadelphia, Pa.
 K. W. Stonder, D. V. M., Iowa State '05, Pullman, Wash.
 W. E. Ralston, D. V. M., Ohio State '04, Pullman, Wash.
 A. J. Damman, D. V. S., Wash. State '05, Ellensburg, Wash.
 C. S. Philips, D. V. S., Wash. State '02, Mt. Vernon, Wash.
 Lewis A. Patric, D. V. S., Wash. State '04, Snohomish, Wash.
 R. Lee Rhea, D. V. S., K. C. '05, McKinney, Texas.

R. R. Clark, D. V. S., K. C. '05, Newport News, Va.
J. Arthur Goodwin, D. V. S., K. C. '06, Napoleonville, La.
Peter Simonson, D. V. S., K. C. '05, Fremont, Neb.
Charles Eastman, D. V. S., K. C. '04, San Luis Obispo, Cal.
Wilhelm Scheumacher, M. D. V., McKillip '01, Durango, Col.
J. C. Gill, M. D. V., McKillip '04, Clarksville, Tenn.
F. W. Morgan, M. D. V., McKillip '06, Chattanooga, Tenn.
Wm. Hilton, V. S., M. D. V., McKillip '06, Winnipeg, Man.
C. D. McGilvray, M. D. V., McKillip '01, Winnipeg, Man.
J. P. Molloy, M. D. V., McKillip '03, Morris, Man.
W. W. Dimock, M. S., D. V. M., N. Y. State '05, Santiago de las Vegas, Cuba.

The application for membership of Dr. Fred W. Porter, Tampa, Florida, was held over because it was not in proper form.

The proposition to place the name of Dr. Schmidt, Kolding, Denmark, on the list of honorary members was received, and will take the regular course.

The application of Dr. George E. Corwin, Canaan, Conn., was laid over for one year.

Drs. Harry D. Gill, New York City; W. L. LaBaw, Boston, Mass., and Edward J. Nesbitt, Poughkeepsie, N. Y., were reinstated to active membership.

The resignations of Drs. James Vincent, Shenandoah, Iowa, and T. B. Pote, St. Louis, Mo., were accepted.

Dr. Wm. H. Wray, London, England, was placed upon the honor roll, as was also Dr. W. H. Hoskins, Philadelphia, Pa.

The meeting adjourned for lunch at noon, and reconvened promptly at 2 o'clock.

The report of the Executive Committee, held on Monday afternoon, was then submitted.

The Committee on Diseases recommended through its chairman, Dr. Chas. H. Higgins, of Ottawa, Canada, in its report for 1905 that it appeared impracticable to continue their work, since it was impossible to present a comprehensive report of the conditions throughout the country, and that the custom of presenting individual papers upon specific subjects was not in conformity with its conception of the work which should properly be done by it. Therefore, when the proposed amendment to the by-laws abolishing this committee came up for discussion, Dr. Higgins spoke in support of the proposition; and he thought that if it were deemed best to continue it its duties should be clearly defined. He suggested as a line of work in

which it might be useful the classification of papers presented by members, thus bringing them before the Association in a more systematic and comprehensive form. Considerable opposition was expressed, however, to the proposition of annihilating this committee, and Dr. W. Horace Hoskins spoke eloquently of the grand work which this body had done in the past, and felt that it would be a backward step to abandon it.

Another proposed amendment to the by-laws was that "to amend Section 2, Article VI," which provided for the admission to membership of "those inspectors of the Bureau of Animal Industry, not otherwise eligible, who have acquired a permanent appointment to a full inspectorship." It developed in the discussion that while the men sought to be admitted were regarded as being worthy, it was at this time dangerous to establish the precedent unless more specifically set forth, and a limitation placed upon it. The matter was referred back to the Executive Committee for further consideration.

The report of the Committee on Intelligence and Education was an exhaustive one, and consisted of the following sections:

"The Value of Veterinary Hospitals upon Education," by Dr. W. L. Williams (read by Chairman Marshall).

"Federal Meat Inspection," by Dr. A. T. Peters (read by the Chairman).

"Examining Boards and Existing Laws," by Chairman C. J. Marshall.

"Veterinary Colleges," by Dr. George R. White.

The first three sections were presented on the first day, the last on Wednesday. Dr. Higgins thought that, while the sections presented by Drs. Williams and Peters were valuable in the extreme, they were out of place in the report of this committee, and in support of his contention read Section 2 of Article V, defining the duties of the committee. There could be no two opinions upon the interpretation of the by-law, and it is likely that such individual papers will hereafter find their proper place among original contributions.

The section dealing with the examining boards and laws governing the profession, by Chairman Marshall, showed a very extensive correspondence with the officials throughout the country, and the collection of accurate data from first hands, together with decisive recommendations for the advancement of work along these lines. In a later number of the REVIEW the tabulated article printed in the November, 1905, number of this journal will be revised and republished. In its preparation

the report of Dr. Marshall will be used largely as a basis, together with Handbook No. 12 of the Education Department of the State of New York, which has an excellent compilation of somewhat similar data. Our aim will be to make this a perfectly reliable condensed statement of all the laws, and the regulations governing examining boards in every State of the union.

The section on schools was the most thorough ever detailed before the Association, and Dr. White is deserving of the thanks of all veterinarians for the intelligence of his work and the energy with which he directed it. At the 1905 meeting his report consisted in the main in the presentation of the replies sent in by heads of the various schools in answer to questions propounded by the committee. This year a number of members living in proximity to the schools were asked to make an investigation of the statements contained in their replies with the object of ascertaining if their answers to the questions were being lived up to, and requesting each to make any suggestions as to the betterment of weak points in the schools. In every instance, save one, the replies showed that the statements were practically true, and the one exception was stated to be utterly untrue, and the committee recommended that its graduates be disbarred from membership in the Association. In two other instances, the committee found that they were very nearly approaching A. V. M. A. requirements, and it recommended that if during the coming session they fulfill their promises, the Association should consider their graduates as eligible.

It was shown that the rule that applications for membership shall be in the hands of the Secretary thirty days before the meeting was working well; that in 1905 (the first trial of the system) there were 19 applications on file, while in 1906—when the rule had become better advertised—there were 55. It was claimed that members were thus secured who were really desirous of joining, and did not rush in during the enthusiasm of a meeting, and that the records are proving that a better class of members are being secured by the new method, and are more apt to live up to their obligations. A motion made to suspend the by-laws so that applications might be considered at this meeting was opposed by Drs. Repp, Harger and others, and it was voted not to do so, the speakers remarking that nothing could be lost by them through having their applications take the regular course, and it would preserve the ideas underlying the adoption of the rule. The motion was lost by a large majority of "nays."

On Wednesday, the meeting opened promptly on time, and the Secretary presented the report of the Executive Committee held at 8 o'clock, which was followed by :

PAPERS AND DISCUSSIONS.

"Arecoline Hydrobromate," by Dr. P. A. Fish, Ithaca, N. Y., while interesting did not provoke much discussion, remarks of speakers being mostly confined to inquiries of the essayist as to certain details of its use.

"Glanders" was the magnet of the morning session, and it proved to be the very best and most thoroughly original consideration of the important subject ever brought out at a meeting in this country. It consisted of three papers :

"The Agglutination Method for the Diagnosis of Glanders," by Drs. V. A. Moore, Walter J. Taylor and Ward Giltner, Ithaca, N. Y.;

"The Agglutination Test in Practice," by Dr. George H. Berns, Brooklyn, N. Y., and

"The Control of Glanders in the Dominion of Canada," by Dr. J. G. Rutherford, Veterinary Director-General, Ottawa, Canada.

Dr. Moore's paper was an exhaustive *résumé* of the subject of agglutination as studied in his laboratory at Ithaca, together with a history of the method in Europe and details of its application and a statement of its apparent value.

In the early spring Dr. Berns became greatly interested in the diagnosis of glanders by the agglutination method through the accuracy with which Prof. Moore picked from about twenty specimens of blood sent him by Berns from as many horses the only three which proved clinically to be affected with the disease. By an understanding between the two, Dr. Berns fitted up a small laboratory in his Brooklyn infirmary and Mr. Cassius Way, assistant at Dr. Moore's laboratory, was secured to conduct a number of tests in Brooklyn upon the blood of glandered and exposed horses in the practices of Dr. Berns and other New York practitioners. The paper presented by Dr. Berns before this meeting was devoted to detailing the results of Mr. Way's work, and the conclusions of Dr. Berns were very favorable to the test, having many advantages over mallein and being very valuable in arriving at a diagnosis when used in conjunction with mallein. One great advantage is that the presence of fever does not affect the property of agglutination, and the degree of infection may be estimated by the power with which the agglutination takes place. With mallein the test is

largely destroyed when fever is present, and many practitioners remarked that in many of their cases there are several degrees of fever. Dr. Berns gave the statistics of 152 specimens of blood from as many horses, the majority of which were in the practice of the author, while the remaining ones were those furnished by practitioners in Greater New York and vicinity. The REVIEW will print Dr. Berns' paper, together with that of Dr. Moore, in the October number, and will therefore not attempt to further analyze it at this time.

Then came the voluminous and intensely interesting report of Dr. Rutherford, based upon the work of his most trusted inspectors, with the laboratory assistance of Dr. Higgins. He had formed some definite conclusions based upon these reports and his own observations, chief among which is the danger lurking in the "ceased-reacters," for while they may show every evidence of having thrown off the infection by failing to respond to mallein, they are capable of spreading glanders, and sooner or later give clinical evidence of the disease.

The discussion which followed was most educational and held the interest of the members just as long as time could be spared for it. Dr. Harger started it by reviewing many of the points brought out by the essayists, and cleared the field for action. He was followed by Drs. Wilcox, Noack, Cotton, Jewell, Law, Gill, Repp, Winchester, Dalrymple, Shaw, Berns, Ward, and others. In Dr. Harger's remarks he asked Dr. Merillat for a reiteration of a section of his report as Resident Secretary for Illinois, wherein he stated that not over 5 per cent. of exposed animals which reacted to mallein ever broke down with clinical lesions. Dr. Merillat was not present, but was informed by a member later of the inquiry, and on the following day arose and repeated his observations, which precipitated another discussion, participated in by a number of the members. The President had to shut off the discussion as being out of order. Later in the day Dr. Rutherford, who was out of the room when the *impromptu* discussion took place, asked the privilege of the floor to reply to Dr. Merillat, and asserted that while the latter was probably correct, that every one of them was a centre of contagion.

It appeared to many of the spectators that while Dr. Rutherford was correct from the standpoint of a sanitarian, private practitioners could hardly afford to adopt such sweeping measures as the destruction of horses which react after exposure without other symptoms of the disease.

"Our Insect Enemies" was the subject of a splendidly prepared paper by Dr. W. H. Dalrymple, of Louisiana; and it won him not only generous applause, but later a vote of thanks by the Association. We are glad to state that a copy of this paper is now in our possession, and will be published in the October number. Those taking part in the discussion were Drs. Monsarrat, Weber, and Ranck.

The Publication Committee reported through Chairman Lyman, giving details of the work done during the year, and making a number of recommendations for future committees. One of Dr. Lyman's recommendations met with considerable opposition, those speaking against it being Drs. Rutherford, Butler and Bell. He suggested that hereafter all papers and other documents presented to the Association shall not be permitted to be published in any newspaper or periodical until after the "Proceedings" have been distributed to the members. The suggestion is evidently inspired by the example of the American Medical Association, which has such a rule for the reason that the Association maintains a magazine called *The Journal of the American Medical Association*, and it is thus sought to extend its subscription list by restricting the publication of the original contributions presented at the meetings of the association to its pages, permitting their republication if credit be given to its dependent journal. To prohibit other journals from printing the more important papers read at the meetings of the A. V. M. A. until they appear in "Proceedings," often six months after adjournment, would be an injustice to the Association and a premium on retrogression. The early publication of important parts of the transactions—original papers, reports of committees, resolutions adopted—is of the utmost assistance to the spread of the influence of the organization and its numerical growth, and it should be encouraged by every legitimate means; surely nothing should be done to discourage it. It cannot be expected that enterprising professional periodicals will engage to publish them at all, if they are only to be gotten at second hand, months after their presentation.

Secretary Repp presented his report for the year, and drew attention to many things looking to the efficiency of the office. He showed the affairs of the organization to be in better shape than ever before; there were fewer suspensions for non-payment of dues, and a better feeling in general among the membership; great hardship is experienced in securing contribu-

tions to the annual program, and this year after appealing repeatedly without adequate result he was compelled to assign subjects to individuals. He closed by thanking all for their uniform courtesy and assistance, and by announcing the termination of his candidacy for reelection, as other duties made it impossible for him to longer serve in the office.

Treasurer White gave an account of his stewardship by giving every item of receipt and disbursement. Briefly his report showed that the receipts for the year had been \$1,900, balance on hand at 1905 meeting, \$10.44, total \$1,910.44. Disbursements \$340.12, leaving on hand \$1,570.32, and he produced a certificate from a Nashville bank showing a deposit of this amount to his credit. He had received at this meeting cash to the amount of \$509.12, which made a grand total of \$2,079.44. He had on hand vouchers for bills amounting to \$1,230.16—leaving cash on hand \$849.28.

The Finance Committee reported after examining the books that they had found them correct, but criticized the system of bookkeeping, which they considered unintelligent to those not accustomed to them.

ELECTION OF OFFICERS.

This was the first working of the new by-law creating a nominating committee composed of all the ex-Presidents in attendance upon the meeting. They were required to nominate at least three members for the office of President, ten at least for Vice-Presidents, two each for Secretary and Treasurer, the names to be presented in alphabetical order, and nominations from the floor may be made in addition.

For President the Committee—composed of ex-Presidents Robertson, Hoskins, Butler, Winchester, Stewart and Bell—placed the names of Drs. Dalrymple, Law and Reynolds before the Association. On the first ballot Dalrymple received 37, Law 36, Reynolds 6. The President decided that no one had received a majority of all the votes cast, and a new ballot was ordered, which resulted as follows: Dalrymple 37, Law 44, Reynolds 2. Dr. Law was declared elected.

To fill the five offices of Vice-President, the following names were submitted: Drs. Ackerman, Bland, Brenton, Cooley, Jensen, Melvin, Merillat, Monsarrat, R. C. Moore, Noack, and Rutherford. When the ballots were counted the following were found to have been elected: Ackerman 35, Jensen 35, Merillat 43, Monsarrat 36, Rutherford 71.

For Secretary, Drs. Lyman and Ranck were placed in nomination, Lyman receiving 47 votes, Ranck 33.

For Treasurer, George R. White and C. J. Marshall were named, but the latter withdrew and White had a walk over.

The officers for the ensuing year are therefore as follows:

President—James Law, New York.

First Vice-President—J. G. Rutherford, Canada.

Second Vice-President—L. A. Merillat, Illinois.

Third Vice-President—W. T. Monsarrat, Hawaii Ter.

Fourth Vice-President—E. B. Ackerman, New York.

Fifth Vice-President—H. Jensen, Nebraska.

Secretary—Richard P. Lyman, Connecticut.

Treasurer—George R. White, Tennessee.

REPORTS OF RESIDENT STATE SECRETARIES.

Dr. Nelson S. Mayo reported verbally for Cuba, as did Dr. W. T. Monsarrat for Hawaii. Reports were read by the Secretaries for Connecticut, Kansas, Kentucky, Pennsylvania, Tennessee, Massachusetts and Illinois, while reports were forwarded to the Secretary and were referred to the Publication Committee for Wisconsin, Porto Rico, Rhode Island, Michigan, Maryland, Maine, Colorado and Arkansas. The report for Illinois by Dr. Merillat was a very vigorous instrument, and dealt with Dr. Ostertag's strictures on American schools with gloves off. He also gave an interesting account of the condition of practice in Chicago, with an estimate of the part played by the automobile in competition with the horse. Incidentally he looked into the schools of his state from the standpoint of one who knows, having been connected with one for years in an executive and teaching capacity, and is at present associated with the other as a teacher. He told of their good points and of their deficiencies, and made as strong an arraignment of their laxity as we have heard from any source.

An interesting discussion not on the program developed when Dr. Rutherford introduced Dr. Adrien Loir, a nephew and laboratory assistant of Louis Pasteur. The Doctor is a professor in Paris, but during his long vacation has been engaged by the Canadian Government to work in the laboratory of the Department of Agriculture. He is regarded as a great expert with rabies, and he was asked to address the meeting. Although it was his maiden speech in the English language, he gave an interesting account of his mission to South Africa to diagnose and repress a disease thought to be hydrophobia which was rapidly

becoming alarmingly prevalent in that country. After he had completed his narrative, he was kept very busy by the members answering knotty questions in connection with rabies. He seemed to grasp every query with lightning speed, and he answered them without a moment's hesitation. Much amusement was provoked by one of these rapid rejoinders. A member wanted to know how infection could occur in the instance of dumb rabies, where the paralyzed lower jaw prevented the animal from biting. Before the question was wholly spoken, the little Frenchman said: "Why, in taking ze bone out of ze throat." Dr. Ranck asked if it were possible for infection to take place through the mother's milk, and told of a case which came under his observation, where a bitch was nursing several puppies. In a few days she developed symptoms of rabies and died. The pups were disposed of and sent to various places. In the usual time every pup died of rabies, in one case after biting seventeen persons. Diagnoses were made by the finding of the Negri bodies and by inoculation. How else did they become affected than through the milk, as the most diligent search failed to disclose the slightest abrasion upon the skin. The inquiry had not died away when Dr. Loir replied that the disease had probably been transmitted to the offspring by the mother licking the open umbilicus. The discussion was entered into by Drs. Rutherford, Lamb, Ridge, Ranck, Lukes, Dalrymple, Baker, Grenside and others.

The Association tendered Dr. Loir a vote of thanks for his valuable talk.

Dr. James B. Paige, of Amherst, Mass., was called upon for his paper on "The Angora Goat and Sheep Industry of New England in Danger," and responded by turning it over to the Committee on Publication, he believing that the great stress upon the program could be relieved by doing so, and those interested could read it in the printed "Proceedings." He was requested from all over the room to read his paper, but adhered to his position.

The meeting then adjourned until 8 P. M., when a large number again assembled to hear Dr. A. T. Peters' paper on "The Eradication of Mange among Cattle in the West." It was illustrated by many stereopticon views, which made it intensely interesting and instructive, and it was well discussed by Drs. Rutherford, Tait Butler, Mayo and others.

After Dr. Peters' session, Dr. Richard Ebbitt, of Nebraska, presented the subject of "Tuberculosis in Swine," indicating

its vast increase throughout the country. It was discussed by Drs. Mohler, Tait Butler, Reynolds, and others.

Then Dr. Charles H. Jewell, the official representative of the U. S. Army, stationed at Fort Riley, Kansas, brought forth his paper on "The Veterinary Service of the United States Army and the Military Veterinarian," which our readers will find in full in this number of the REVIEW in the "Army Veterinary Department." It was discussed by Drs. Budd (chairman of the Army Committee of the A. V. M. A), Law, Harger, Rutherford, and others. It was suggested that the Army Legislation Committee be broadened so as to include all judiciary matters in which the Association is concerned.

On Thursday morning the convention assembled promptly at 9 o'clock, and the Secretary presented the report of the Executive Committee held at 8 o'clock. The Committee recommended that the charges against Charles Ellis, St. Louis, Mo., be sustained, and that he be expelled from membership for advertising in violation of the code of ethics, which was carried by the Association. It recommended that Dr. W. F. Harrison, of Bloomfield, N. J., be reinstated to active membership. Carried. It was recommended that the various recommendations of the officers and committees be referred to the incoming Executive Committee. Carried. It was recommended that the resignation of Dr. E. M. Nighbert, Lynchburg, Va., be not accepted. Carried.

After the Executive Committee's report had been disposed of, Dr. Austin Peters, of Boston, read a paper on "The City Milk Supply," which was exhaustively discussed by Drs. Butler, Gill, Hoskins, Ridge, Piatt, Robertson (Chicago) and Marshall.

Dr. W. L. Williams, Ithaca, N. Y., then came forward with a paper entitled "Notes on Roaring," in which he reviewed the various surgical attempts to relieve the condition from ancient times down to the rather numerous methods in vogue among American veterinarians during the past twenty years, dealing especially with those which are on trial at the present time. He minutely described the technic of his own method, which he claimed to be merely a modification or extension of others which have been practiced with varying success. Those who discussed the subject were Drs. Gill, Harger, Merillat, Newton, and Williams.

"Present Status of the Crusade Against the Southern Cattle Tick" was to have been read by Dr. Tait Butler, of North

Carolina, but instead he turned it over to the Publication Committee, taking the platform and delivering a vigorous speech in behalf of the proposition to lift the great curse upon the cattle industry of the Southern states. He told of the recent Congressional appropriation of \$82,500 for this purpose, and announced that the work of education and eradication had already begun. To those who have given this subject but little thought, the magnitude of the destruction wrought by the *Boophilus annulatus* is unappreciated. Dr. Butler estimates that it annually causes a direct monetary loss below the Federal quarantine line of \$40,000,000.

Dr. Connaway, of Missouri, sent in his paper on "Recent Developments in Immunization Against Southern Cattle Fever," but as he was not present it was turned over for publication.

"Dissemination of Tubercle Bacilli by Insects a Source of Contagion," by Dr. S. E. Weber, Lancaster, Pa., was next listened to with much interest, and a new line of thought was opened up in a prominent manner.

Several other very important papers were upon the program, but all had to go over to the Publication Committee. Among these were Pearson's "Veterinary Schools of Europe," Hughes' "Veterinarian as a Business Man" (published elsewhere in this number of the REVIEW), Rich's "Management of Tuberculosis in Vermont," White's "Veterinary Education in the United States," and others.

The Committee on Resolutions rendered their report, and after being received, the sections were taken up and adopted:

RESOLUTIONS ADOPTED.

Congressional Liberality.

WHEREAS, Our Federal Congress in its recent session has dealt very liberally with lines of work in which this Association is interested, and

WHEREAS, We wish to express our appreciation of the wisdom and liberality thus shown; therefore, be it

Resolved, That we take this means for thanking Congress,

1st. For passing the new meat inspection law, which we believe will prove even more effective than the one previously enforced and which is perhaps broader and more stringent than the meat inspection laws of any other country;

2d. For making an appropriation of unparalleled liberality to enforce this new inspection law;

3d. For appropriating generous funds for work in exterminating the Texas fever cattle tick;

4th. For providing for the supervision and standardization of various toxines and vaccines by the Bureau of Animal Industry ;

5th. For increasing by \$15,000 the annual appropriation to each of our state agricultural colleges and experiment stations, a part of which will be available for the work of station veterinarians.

Texas Fever.

WHEREAS, A coöperative effort has been inaugurated by the United States federal authorities and those of the infected Southern states below the quarantine line with a view to extermination of the common cattle tick (*Boöphilus annulatus*) from those states, and

WHEREAS, The success of such effort will be of incalculable benefit to the cattle interests of the entire United States, and

WHEREAS, An appropriation of \$82,500 has been secured through a bill introduced into Congress by the Hon. Joseph E. Ransdell, of Louisiana, and this splendid result has been largely brought about by the efforts of the Association of Cotton States Commissioners, representatives of Southern experiment stations, state boards of agriculture, state and station veterinarians ; therefore, be it

Resolved, That we express our appreciation of the great significance of this movement, our realization of its enormous importance to the cattle interests of the United States and Canada, and that we heartily congratulate the Hon. Joseph E. Ransdell, Congressman from Louisiana, the Association of Cotton States Commissioners, our veterinarians, experiment station and agricultural college authorities, and all others who took an active part in forwarding this movement of so great national and international importance.

Dr. D. E. Salmon.

WHEREAS, The United States with its vast territory and wide range of climatological conditions has found in its wonderful growth many serious and intricate problems with which it has been compelled to deal. Among these have arisen large and difficult problems relating to our live-stock interests. The health, the wealth and prosperity of this people have been intimately related to the whole sphere of animal husbandry, and the preservation of our live-stock interests in all the various lines involved, touches the well-being of every citizen of this country, and

WHEREAS, Under the direction of one of our members there was developed in the United States a federal control department that has achieved a solution of problems in state control work which older nations of the world had utterly failed to solve, and work so well done that it stands almost without a peer, giving the richest returns to our people; therefore, be it

Resolved, That we thus publish our appreciation of this magnificent work, our opinion of its enormous value to the United States and to the world; and give credit to one of our members whose earnestness, wisdom and energy, and wonderful devotion to his work brought about such splendid results; and be it further

Resolved, That in thus honoring the more than a score and a half years of faithful service by Dr. D. E. Salmon as Chief of the United States Bureau of Animal Industry we are doing ourselves credit and rendering an honor which is justly due, and we desire to note in the annals of our Association records our sincere appreciation and commendation of our esteemed and greatly honored fellow-member, Dr. Salmon.

[Dr. Bell in speaking upon this resolution stated that he had received a letter from Dr. Salmon on the eve of his (Bell's) departure for the convention, in which he said: "I hope you will tell the Association in superlative terms of the deep disappointment which I feel at missing this meeting—a disappointment which is made all the more intense by my prospective departure for a new field of work in a distant country. The sympathy and assistance which the veterinary profession of the United States extended to me throughout my official career will always be a pleasant memory and a source of gratification; and I hope to be able in some way to keep in touch with the profession and to feel that I am still a part of it." Dr. Bell's remarks were ordered included with the resolution in the minutes.]

Dr. A. D. Melvin.

WHEREAS, Dr. A. D. Melvin has been appointed Chief of the United States Bureau of Animal Industry, and

WHEREAS, In making this appointment, ability and long service in the Bureau have been rightfully considered, and

WHEREAS, By long personal experience in the several divisions of the Bureau service, and by direct contact with all subordinate officials, while performing the duties of Assistant Chief of Bureau he has engendered general confidence as an executive officer; be it

Resolved, That we, the American Veterinary Medical Association, in convention assembled at New Haven, Conn, August 22d, 1906, do fully and heartily endorse the appointment of Dr. A. D. Melvin, our fellow-member, to the most important professional position open to a veterinarian in the service of the United States Government.

Dr. J. G. Rutherford.

WHEREAS, The Dominion of Canada has recently honored our profession, and this Association, by making our distinguished colleague, Dr. J. G. Rutherford, present Veterinary Director-General of Canada, Live Stock Commissioner for the Dominion; therefore, be it

Resolved, That we express our appreciation of the honor thus done us; and of the wisdom displayed on the part of the Canadian Government; and of the deep significance which this and similar movements have upon the future work and relations of the veterinary profession to national and international live stock interests, and be it further

Resolved, That we heartily endorse the action of the Dominion and congratulate Dr. Rutherford upon this great honor deserved and received.

Veterinary Schools and Inspection in Canada.

WHEREAS, Canadian veterinarians have apparently succeeded in placing the veterinary colleges under immediate government control, in doing away with two-year courses; and insuring the development and progress of institutions which will give great honor to our profession, and

WHEREAS, The veterinary inspection service of the entire Dominion has been unified and most efficiently organized during very recent years; therefore, be it

Resolved, That we heartily congratulate them upon the splendid spirit of progress thus shown and their ability to accomplish what they undertake for the good of the profession. And be it further

Resolved, That we tender the hearty support of this Association in any further work of this kind which they may undertake.

Canadian Veterinary Control Work.

WHEREAS, In the presentation of Canadian State control work with glanders by Veterinary Director-General Dr. J. G. Rutherford, it is apparent that the Canadian Government has undertaken control work with infectious diseases of animals upon a scale that is highly creditable and in a way commensurate with the importance of the work, and

WHEREAS, Actual results shown in this report plainly justify the heavy expenditures incurred ; therefore, be it

Resolved, That we commend those in higher Canadian Government authority for thus generously supporting this work and commend the general organization and plan of the Canadian work to the consideration of the federal authorities and to our various state authorities in so far as it may be applicable to their conditions and not already in force.

The Committee on Legislation.

WHEREAS, We feel that it is highly important for this Association and the profession which we represent to come into closer and more influential relations with our state and federal legislative bodies ; therefore, be it

Resolved, In accordance with the recommendation expressed by President Lowe in his annual address, that the scope of the committee on Army Legislation should be broadened so as to include all legislation which affects the interests of our profession, and the live stock interests of the several countries represented in our Association, and that the title given this committee should be altered accordingly.

Death of James B. Raynor.

WHEREAS, This Association has suffered a great loss in the death of one of our oldest and most universally beloved members, Dr. James B. Raynor, of Westchester, Pennsylvania, who attended the first meeting of this Association ever held, and who was ever a faithful attendant, and loyal worker until his death at the ripe age of 78 years. Dr. Raynor was a most successful practitioner and very deeply respected by all who knew him. Therefore, be it

Resolved, That we thus express our sorrow and sense of loss ; that a copy of this resolution be sent to his family, and that it be published in the permanent records of this Association.

Local Committee of Arrangements.

Resolved, That we tender a vote of thanks to the members of our local committee of arrangements, to the hotels and all who aided for the very satisfactory provisions made for the work of the Association, and the generous spirit of hospitality as shown in their arrangements made for the social entertainment.

W. Horace Hoskins.

WHEREAS, Our distinguished fellow-member, Dr. W. Horace Hoskins, completes at this meeting a period of membership

covering twenty-five years and a record of twenty-six consecutive meetings attended, having never missed a meeting since joining the Association; having been always ready to work in any capacity or place, having served this Association for several years as Secretary, and then as President, and always as a hard-working, active member; therefore, be it

Resolved, That as his name now goes on the honor roll of active members we express our deep appreciation of those long years of faithful service and his intense loyalty to the profession.

Bureau of Animal Industry Inspection Service.

WHEREAS, The United States Bureau of Animal Industry inspection service has been the subject of repeated and rigid investigation on account of its relation to the recent packing house investigations and has not been seriously criticised in any case; therefore, be it

Resolved, That we congratulate this branch of the United States federal service on its creditable record, and express our pleasure in this showing on the part of an important branch of our federal veterinary service.

Representatives of Other Bodies in Attendance.

WHEREAS, We feel that it is a highly creditable procedure for state boards of agriculture, state live-stock sanitary boards, for the various branches of federal veterinary service, veterinary associations and foreign governments, to send representatives to the meetings of this Association, as well as a high compliment to the importance of our work, and

WHEREAS, We feel that it is a matter of great importance for us as individual members of this Association to get as many points of contact as possible with national and state affairs in which we are interested; therefore, be it

Resolved, That we extend a vote of appreciation and congratulation—appreciation for the recognition thus given the work of this Association and to the importance of the veterinary service in its several fields, and of congratulation for the spirit of progress and of liberality thus shown.

Dr. R. P. Lyman.

WHEREAS, Dr. R. P. Lyman is now retiring from the position of Chairman of the Publication Committee after two years of faithful and efficient service in an arduous work; therefore, be it

Resolved, That we express our appreciation of this faithful service by tendering him our sincerest thanks.

Veterinary Progress in Foreign Lands.

WHEREAS, A survey of the recent foreign veterinary medical field brings into bold relief matters of world-wide importance and in which we as a profession are vitally interested; therefore, be it

Resolved, That we express our appreciation and tender a compliment to our foreign colleagues for the magnificent work in progress with anti-tuberculosis vaccines for cattle and for the great encouragement which this work is giving to the entire medical world in relation to the prevention and treatment of human tuberculosis; for the very creditable work that has been done in connection with the discovery with the Negri bodies and other good research in connection with rabies, and various other diseases of domestic animals.

The adoption of the resolutions left only time for the installation of the new officers, and in taking possession of their posts each returned thanks for the honor conferred and pledged their best efforts for the good of the Association.

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THE CLINIC.

The clinic was held in a tent at the rear of Harmony Hall on Friday, 24th, beginning promptly at 8 o'clock. The arrangements were the best that the Association has ever had prepared for its accommodation, while the management was most excellent. An innovation was admission by card, and these were issued only to members, visitors and attendants, thereby keeping out the curious crowds who merely obstruct the work and obscure vision. A special policeman was stationed at the door, and he only admitted those who were in possession of admission cards or could sign professional registration cards. In this way the tent (large enough for half a dozen operations at one time and for about 200 persons) was never crowded and a good view could be obtained of all that transpired. Another improvement over former conditions was the stretching of a rope around each operator and the subject, thus keeping the people from crowding too closely. It was aimed to demonstrate operations under varying conditions, by confining animals by different means. At one end there was the Kansas City Veterinary College operating table, and it was in constant use, illustrating its application for operations upon different parts of the body. It is a comparatively inexpensive table, well adapted for veterinarians who have limited room at their disposal. In

the centre of the space was a Bradwood Humane operating table, illustrated in the advertising department of the *REVIEW*, and several operations were performed on it. At the other end were beds of nice white straw, and here a large number of horses were cast for the majority of the operations. Dr. George R. White, of Nashville, did the throwing with side-lines, and everybody commented upon the rapidity, ease and safety with which the horses were laid down, and the security with which they were tied when in the recumbent position. Modern methods marked the work of the skilful surgeons—everything sterilized, anæsthesia in almost every case (general when necessary, local when possible), the latest and best instruments, and every equipment for doing the best work. A local veterinarian who seems to be at dagger's point with every other veterinarian in the state attempted to make trouble by sending an officer of the Humane Society to arrest somebody, the officer claiming that he had been informed that unnecessary operations were being performed, or that animals were being caused to suffer pain simply to demonstrate surgical methods. He read the word "President" on Dr. Lowe's badge, and thought he would prove a good one to lock up, but when shown what was being done he changed his mind, and remained to witness many of the procedures.

The local committee are entitled to and unstintingly received the greatest praise for the success which crowned their untiring efforts to have every cog in the intricate machinery work smoothly, and the ideal clinic which we have all been hoping for was as nearly secured at New Haven as could possibly be expected in the few years they have been in operation. Each year has marked a distinct advance; never has there been a backward step. From the crude effort at Omaha in 1898 to the event at New Haven is a long stride in a very short time. The one lacking facility for demonstration of a very useful means of restraint for the majority of operations in every-day practice was an improved "stock," and if an up-to-date operating table for small animals had been installed it would have added much to the equipment. But this is not offered in criticism, which was absolutely disarmed; it is simply suggested for the consideration of future committees. The serious drawback at Cleveland of stump-speaking by some of the surgeons, taking attention from valuable demonstrations by addressing groups upon elementary surgery and anatomy, was eliminated completely, and one surgeon who attempted it (merely through

interest in his subject) was promptly checked when he had exceeded the limit necessary to explain his methods.

The local committee of arrangements consisted of Dr. E. C. Ross (chairman), Dr. J. H. Kelley and Dr. Harrison Whitney, of New Haven; Dr. R. D. Martin, Bridgeport; Dr. H. E. Bates, South Norwalk; Dr. Thomas Bland, Waterbury; Dr. G. W. Loveland, Torrington, and Dr. R. P. Lyman, Hartford.

The following brief *résumé* of the demonstrations is offered as a summary of what was done, without any effort at detailed description:

I.—Bay gelding, roarer; diagnosis by digital exploration by Dr. W. L. Williams; cast upon bed of straw and secured with side-lines by Dr. George R. White. Lysol injected subcutaneously at seat of operation. Surgeon, Dr. H. D. Gill, New York City.

II.—Roan mare, cartilaginous quittor, inside off forward foot. Secured on Kansas City Veterinary College operating table. Cocaine locally. Method, modified Bayer operation. Surgeon, Dr. R. C. Moore, Kansas City, Mo.

III.—Bay gelding, roarer. Cast upon bed of straw and secured with side-lines by Dr. White. Anæsthetized with chloroform by Dr. Chas. H. Jewell, of Fort Riley, Kansas. Surgeon, Dr. W. L. Williams, assisted by Dr. L. A. Merrillat, of Chicago, Ill.

IV.—Skewbald gelding, intrascrotal champignon. Cast upon a bed of straw and secured with side-lines by Dr. White. Surgeon, Dr. S. J. J. Harger, of Philadelphia, Pa., assisted by Dr. Fernsler.

V.—Gray mare, incurably lame from ringbone left hind. Operation, high plantar neurectomy. Confined on Bradwood Humane operating table. Surgeon, Dr. H. D. Gill.

VI.—Black gelding, roarer. Cast and secured with side-lines by Dr. Klotz. Anæsthetized with chloroform. Surgeon, Dr. W. L. Williams, assisted by Dr. E. B. Ackerman, Brooklyn, N. Y.

VII.—Bay gelding, roarer. Confined on K. C. V. C. operating table. Anæsthetized with chloroform by Dr. Jewell. Surgeon, Dr. L. A. Merrillat, assisted by Dr. James Robertson, Chicago.

VIII.—Black gelding, carcinoma of penis. Operation, amputation. Cast and secured by Dr. White. Anæsthetized with chloroform. Surgeon, Dr. Merrillat.

IX.—Bay gelding (trotter), exostosis inside off knee. Opera-

tion, median neurectomy. Cast and secured by Dr. White. Local anæsthesia. Surgeon, Dr. Harger, assisted by Dr. Chesley.

X.—Demonstration of harness for the operation of castration in the standing position. Dr. Geo. R. White.

XI.—Gray gelding, cartilaginous quittor. Operation, full Bayer method. Local anæsthesia with cocaine. Confined on K. C. V. C. operating table. Surgeon, Dr. Geo. H. Berns, Brooklyn, assisted by Dr. Thomas E. Smith, Jersey City, N. J.

XII.—Gray gelding, dentigerous cyst at base of off ear. Cast and secured by Dr. White. Anæsthesia with chloroform. Surgeon, Dr. Williams.

XIII.—Black gelding, fistulous withers. Confined on Bradwood table. Surgeon, Dr. Gill.

XIV.—Gray mare, demonstration of naso-cesophageal intubation, soap being used as a lubricant. Surgeon, Dr. George R. White.

XV.—Brown mare, carious 4th molar tooth, left side. Operation, trephining and repulsing. Cast and secured by Dr. White. Chloroform anæsthesia by Dr. Jewell. Surgeon, Dr. Merillat.

XVI.—Brown gelding, roarer. Cast and secured by Dr. White. Surgeon, Dr. Gill, assisted by Dr. R. A. McAuslin, Brooklyn, N. Y.

XVII.—Bay gelding, 9 years old, black points except white off hind pastern. Nodulated lymphatics inside off hind leg extending from hock into inguinal region. General diagnosis, melano-sarcoma. Sections taken by Dr. John R. Mohler, B. A. I., Washington, D. C., who will report result of microscopical examination. Operation not advised.

XVIII.—Gray mare, general melanosis about anus and vagina, tumors of large size. Cast by Dr. White. Anæsthesia with chloroform by Dr. Jewell. Surgeon, Dr. Merillat, assisted by Dr. W. E. Wight, Pittsburgh, Pa.

XIX.—Gray gelding, pectoral fistula. Cast by Dr. White. Anæsthetized with chloroform. Surgeon, Dr. Harger, assisted by Drs. Lukes, Martin and Mitchell.

XX.—Demonstration of special anæsthetic cone by Dr. J. A. McLaughlin, Providence, R. I.

XXI.—Bay gelding, lame off forward leg. History, fell, afterwards becoming lame, was treated and turned out for three months, but did not improve. Diagnosis by Dr. A. H. Baker, Chicago: navicularthrititis, history ignored. Advice, plantar neurectomy.

XXII.—Brown mare, carious 4th molar tooth. Operation, repulsion, tooth split with chisel. Confined on K. C. V. C. table. Local anæsthesia with 15 per cent. stovaine. Surgeon, Dr. Williams, assisted by Drs. Knapp, Merillat and Andrews.

XXIII.—St. Bernard dog, fibroid tumor left side neck, weighing two pounds. Operation, extirpation. Anæsthesia with chloroform through McLaughlin cone. Surgeon, Dr. Harry Lukes, Springfield, Mass. The dog died on 27th.

XXIV.—Bay gelding, ringbone off forward leg. Operation, high plantar neurectomy. Local anæsthesia with cocaine. Surgeon, Dr. C. H. Perry, Worcester, Mass., assisted by Drs. W. T. White and F. J. Babbitt.

XXV.—Brown mare, infected navicular bursa from nail prick. Operation, resection flexor pedis perforans. Confined on K. C. V. C. operating table. Chloroform anæsthesia. Surgeon, Dr. Williams, assisted by Drs. Knapp, Thompson and Andrews.

XXVI.—Brown mare, carious 4th molar tooth. Cast and secured by Dr. White. Operation, trephining and repulsing; external alveolar plate removed with chisel. Local anæsthesia with stovaine. Surgeon, Dr. Andrews.

XXVII.—Black gelding, roarer. Cast and secured by Dr. White. Chloroform anæsthesia. Surgeon, Dr. Williams.

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PATHOLOGICAL EXHIBIT.

Through the kindness of Dr. W. Reid Blair, Pathologist of New York Zoölogical Park, the following interesting specimens were offered for the inspection of the members and visitors. They were rare conditions, as a rule, and it was a thoughtful kindness for Dr. Blair to thus permit his less fortunate colleagues to share his splendid opportunities.

1. Actinomycotic tumor of salivary gland, from grizzly bear.
2. Several specimens of invaginated bowel, from monkeys, coyote and wolf.
3. Heart of wolf showing blood filariæ (*Filaria immitis*) in right ventricle.
4. Liver, spleen, kidneys and lungs of a Gibbon, showing generalized miliary tuberculosis.
5. Heart of prong-horned antelope showing *Cysticerci celulosa*.
6. Uterus, fallopian tubes and ovaries of a mule deer,

showing all infected with tape-worm hydatids (*Cysticercus tenuicollis*).

7. Numerous specimens of large hydatid cysts from Asiatic mountain sheep, American deer and antelope.

8. Tumor, myxo-sarcoma, from abdominal cavity of Japanese raccoon-dog.

9. Cystic liver from a deer.

10. Actinomycosis of liver and diaphragm, from an American prong-horned antelope.

11. Lung of elk, showing thousands of bronchial filariæ in the bronchial air tubes.

12. Thirty-two feet of tape-worm, from a Polar bear.

13. Numerous specimens of blood filaria from sea-lions, monkeys, and wolf.

14. Large colon of a black pug-dog, showing hæmorrhagic colitis due to infection with the true whip-worm (*Trichocephalus depressiusculus*), hundreds of specimens of the worm present.

* * *

THE BANQUET.

The banquet occurred on Thursday evening in the large dining hall of the Tontine, when one hundred and ninety-two guests seated themselves around long rows of tables which extended into adjoining rooms. There was the largest number of ladies present that ever graced these occasions, and the *menu* was quite acceptable.

Dr. J. G. Rutherford was the toastmaster, and a royal one he proved, for his fluent oratory and fund of wit kept the diners in good trim, and the setting he threw around the speakers in his introductions was not the least enjoyable part of the program.

In introducing the first speaker, Dr. W. H. Dalrymple, he fairly smothered him with words of praise for the great work he has done in the South, not only for the people of that section, but incidentally for the eminent service he has rendered his profession in creating an interest in its great possibilities for good and creating a high respect for those who constitute its representatives. The speaker rose to respond amid the deafening applause of the guests, and he gave them a clear insight into the great problems confronting the profession in the South, and the awakening of the people to the great work which has been accomplished through the discovery of the source of contagion of yellow fever, Southern cattle fever, and other scourges which are being made to disappear under modern sanitary medicine.

Then the toastmaster introduced Prof. W. H. Brewer, of the Agricultural Department of Yale University, who delivered an address full of interest to students of comparative medicine and animal husbandry. The toastmaster stated in his introduction that Prof. Brewer had predicted the two-minute trotter nearly forty years ago, and in explanation of this the speaker said that the thoroughbred running horse was the only horse which had reached its limitations, and gave statistics to show that a very large number of them had approached very close to the record, while only a few trotters and pacers have gone extremely fast. He showed great familiarity with the history of sanitary medicine, and congratulated the veterinarian upon the honor he possessed in being a veterinarian, as it is a noble calling, with vast opportunities before it. He believed our chief patient, the horse, was well suited for human alimentation, and thought the old family horse, fatted and prepared for the butcher, would be as luscious, if not more so, than the family cow.

"Veterinary Education and the Stock Owner" was the subject assigned the Hon. Mr. Holcomb, and no one could have treated it in a more entertaining manner. He believed thoroughly in the veterinary profession, and was in hearty sympathy with the profession of the state in its efforts to secure adequate legislation.

Following this "The Silver Anniversary" of Dr. W. Horace Hoskins was announced by the Chair in words which were re-echoed by all who know what this loyal member of the A. V. M. A. has accomplished in the twenty-five years that he has been a member, and during which long period he has never failed in attendance upon its meetings, wherever he has had to journey. He spoke feelingly of the growth of the organization and the wonderful work which it has accomplished in that time, believing it has achieved more good than any similar organization in the world.

When he had concluded his remarks Dr. Wm. Herbert Lowe, the retiring President, caught the eye of the Chairman, and rising to his feet paid high tribute to Dr. Hoskins. At a signal there was brought to the latter's table an elegant and immense cut-glass punch-bowl, with individual glasses, and it was tendered to Dr. Hoskins by the members through Dr. Lowe in recognition of the great record which he had just completed and as a token of their appreciation of his services in behalf of the Association and the cause of veterinary medicine.

The recipient rose to thank his friends, but he was entirely

too much overcome by emotion, and the few words which he uttered in recognition of their gift were by no means an index to the feelings which possessed him.

The Hon. Wm. H. Warner spoke to the toast of the "State of Connecticut," which he did in a pleasing manner.

Dr. Tait Butler then eloquently addressed the banqueters, responding to the sentiment of "Sanitary Control Work," which he reviewed briefly and in an interesting manner, avoiding details sufficient to save the effort from being tedious to the ladies, but at the same time he threw the limelight on the burning questions of the day.

Dr. Wright, of the Board of Health, responded to "Our Sister Profession," and showed the advances made in recent years in the domain of human medicine.

Dr. A. H. Baker, of Chicago, spoke to the toast to "The Schools," and accomplished his task in an acceptable manner. He refused to accept the suggestion of Prof. Brewer that the family horse should be fatted for the dinner table, and thought it would be a sad feast for those who loved their pets. He recognized the essential patronage of the schools and asked the pertinent question as to where the profession would be if there were no schools; and

Dr. Roscoe R. Bell, in responding to the toast to "The Ladies," continued the query by asking where the veterinarian would be if it was'n't for the ladies? He disclaimed any intention of offering a peroration to the subject of his toast, but preferred to talk about our own ladies and their influence upon the character and growth of the Association, contending that their presence had not only rendered the meetings more enjoyable, but had largely increased the attendance upon them. He also gave a brief history of their attendance upon our meetings, beginning with the Buffalo meeting in 1896, until the present year, pointing to the red-letter meeting at Minneapolis, when the ladies first graced the banquet table.

Dr. E. C. Ross, Chairman of the Local Committee of Entertainment, gracefully but modestly responded to the toast to his Committee, and then one of the best of such occasions was brought to a pleasant close at about 1 o'clock.

* * *

NOTES OF THE A. V. M. A. MEETING.

"The best way to get a spavin off is to swap it off."—(*Dr. Hanshew, Brooklyn, N. Y.*)

There were 192 guests at the banquet on Thursday night, easily the record in the history of the annual dinner.

The extremes met at New Haven when Monsarrat registered from Hawaii and McCuaig from New Brunswick.

Dr. W. T. Monsarrat and family, of Honolulu, H. T., were the guests of Dr. Roscoe R. Bell, at his home in Brooklyn, for a couple of days while on his way to New Haven.

President Lowe covered himself with honor by the splendid address he delivered at the opening of the convention. It was loaded with pertinent suggestions for the benefit of the Association.

Many of the most noted surgeons of the country operated at the clinic—Williams, Merillat, Harger, Gill, Berns, and others; while Geo. R. White proved a cyclone in the casting and securing of subjects.

A New York City veterinarian came up to the clinic and appeared to be much interested in what was transpiring. He was a stranger to all, until some one guessed that it was Charles E. Clayton minus his golden whiskers.

Interviews with veterinarians from all sections of the United States disclosed the flourishing condition of veterinary practice, almost every one declaring that they were driven to their utmost capacity continuously.

The boat ride on Long Island Sound was greatly enjoyed, particularly by those from the inland. The weather was splendid for such an event, the music excellent, and the spirit of levity ran high. Dancing was indulged in, and all were happy.

The South was well represented at New Haven—Dalrymple and White, Louisiana; Hill, Florida; Ranck, Mississippi; Friedheim, South Carolina; Butler, North Carolina; White, Tennessee; Piatt, Kentucky; Clark, Virginia; Dougherty, Mackie and Jarman, Maryland.

Dr. W. L. Williams made some notable converts to his method of diagnosing roaring while the animal is at rest. He seldom fails by the digital exploration of the laryngeal apparatus, detecting the atrophied muscles of the left side, with a soft non-resistant condition of the cricoid cartilage.

A substance called "sulphur starch" was used in the clinic for removing hair from the field of operation. It resembled paste, was applied thickly, and after five minutes was washed off, taking with it every vestige of hair, without injury to the skin. Many spectators rubbed it on their wrists with similar results.

There were never so many invitations to secure the next meeting of the Association. Next year's convention is sought by Kansas City, Denver, Honolulu, Atlantic City, Seattle, Jamestown, Saginaw, Chautauqua, and Niagara Falls. The sentiment seemed to rest with Kansas City and Denver, with the former a 2 to 1 favorite.

Late in the afternoon of Friday an unrecognized veterinarian of New Haven tried to gain entrance into the tent where the clinic was being held, but was repulsed. His lawyer failed to convince the Chief of Police that he could legally enter, and he took revenge by instituting suit against Dr. Bland for \$10,000 for injury to his reputation.

Dr. Wm. H. Wray, B. A. I., London, England, sent over some currency by Dr. Dougherty, with instructions to gather together as many of his old friends as possible and drink to the sentiment of "Auld Lang Syne." If one might judge by the frequency with which the health of "Wray" was toasted, the Bank of England note he sent must have been of generous proportions.

Many of the Western veterinarians with their families went on to New York or other Eastern cities on sight-seeing or shopping expeditions. At Coney Island on Monday evening we met Drs. Jenson and McKim and families, of Nebraska, while Dr. W. L. Williams, wife and son, of Ithaca, were shooting the chutes in Luna Park. Although we heard that Dr. Reynolds, of Minnesota, was also there, we did not come in contact with him.

Mr. Charles F. Roberts, who has done the stenographic reporting for the convention the past two years, is a past master at the work. His familiarity with medical phraseology and acquaintance with the speakers is of great assistance in expediting the work and omitting errors. As his fees are no larger than other first-class reporters, the incoming publication committee would do well to give preference to his bid for the 1907 meeting.

It was generally observed that horses anæsthetized with chloroform at the clinic recovered in remarkably short time. One animal was up and eating in ten minutes from the time the inhalations of the drug had ceased, while all were on their feet in less than the usual time. This we heard accounted for by the free access to pure air afforded by the open tent, as against a stuffy operating room, where such patients often lie on the table or floor for an hour before attempting to get up.

There were present at New Haven the largest attendance in the history of the Association. The following table will be interesting for the purpose of comparison :

PLACE AND YEAR.	Members.	Visiting Veterinarians.	Lady Visitors.	Other Visitors	Total.
Ottawa, Canada, 1903.	103	50	62	86	301
St. Louis, Mo., 1904 .	175	66	58	16	315
Cleveland, Ohio, 1905.	130	111	70	22	333
New Haven, Conn, 1906	144	84	88	58	374

Dr. Monsarrat came to the convention with the idea of stampeding it for Hawaii in 1907. He was loaded with beautiful silk flags, upon which was printed in large letters "Hawaii 1907," and he brought letters from all the prominent commercial associations of Honolulu, guaranteeing easy rates and a good time. There is no question but that under the generous patronage of our own Monsarrat, the pilgrimage to the Paradise of the Pacific would be the realization of life's dream, but when we come back to the sober democracy of "the greatest good for the largest number," the intoxicating thought must be displaced for the realism of duty.

The Association of Veterinary Faculties and Examining Boards held two meetings—the first on Monday evening, lasting until near midnight; the second during the sail on the Sound Thursday. A better understanding was had between the three elements composing the Association—schools, examining boards, and A. V. M. A.—and those present felt much encouraged over the prospects of accomplishing some good. All the schools represented agreed to submit their matriculates' examination papers at next year's meeting. Dr. Hoskins was reelected President, Dr. Bell Vice-President.

New York had the largest number of veterinarians present of all the states—28 members, 12 visiting veterinarians (40); Connecticut, 14 and 25 (39); Massachusetts, 18 and 14 (32); Pennsylvania, 15 and 8 (23); New Jersey, 12 and 3 (15); Illinois, 7 and 1 (8); Ohio, 5 and 2 (7); Canada, 5 members; Nebraska, 4 and 3 (7); Missouri, 3 and 2 (5); Minnesota, 4 members; Indiana, 3 members; New Hampshire, 1 and 4 (5); District of Columbia, 2 and 1 (3); Maryland, 3 members; Michigan, 2 and 1 (3); Iowa, 2 members; Louisiana, 2 members; Vermont, 1 and 2 (3); Rhode Island, 1 and 2 (3); all others, 1 each.

ILLINOIS VETERINARY MEDICAL ASSOCIATION

The 24th semi-annual meeting of this Association was called to order at 9 o'clock, A. M., in Exchange Hall, Illinois Hotel, Bloomington, July 12th, by President W. H. Welch, D. V. S.

Minutes of preceding meeting were read and approved.

The following visitors and members were present: Drs. W. H. Welch, Lexington; N. I. Stringer, Paxton; F. H. Barr, Pana; H. J. Mau, Herscher; O. A. Kyle, Bloomington; George B. Jones, Sidell; W. J. Martin, Kankakee; J. T. Nattress, Delavan; D. L. De Vore, Le Roy; C. G. Glendinning, Clinton; A. G. Alverson, Bloomington; L. C. Tiffany, Springfield; Albert Babb, Springfield; F. A. Laird, Auburn; W. E. Giller, Roodhouse; R. E. Nesbitt, Lincoln; D. E. Kinsella, Chillicothe; N. W. Kyle, Colfax; T. E. Giller, White Hall; L. R. Dillon, Fremont; C. R. Andrew, Atlanta; M. Fletcher, Bethany; B. F. Hudson, Mowequa; C. C. Mills, Decatur; I. Stallman, Pontiac; F. H. Wessell, Pontiac; Fred H. Burt, Chenoa; C. F. Behner, Marshall; Carl H. Yoder, Watseca; W. H. Withers, Magnolia; W. C. Bates, Ellsworth; C. H. Mamhart, Bloomington; E. A. Jenkins, Shelbyville; G. Z. Barnes, Pekin; M. Story, Bradford; H. H. Preslet, Fairbury.—(36).

The following applications for membership were read, and, upon the ballot being spread, were declared elected: Drs. O. A. Kyle, Bloomington; W. E. Bates, Ellsworth; F. H. Wessell, Pontiac; R. E. Nesbitt, Lincoln; W. H. Withers, Magnolia; Carl H. Yoder, Watseca; Marion Fletcher, Bethany; Henry Jacob Mau, Herscher; L. Roy Dillon, Fremont; C. H. Behmer, Marshall; D. L. DeVore, Le Roy; R. F. Harris, Hillsborough; E. A. Jenkins, Shelbyville; Bently F. Hudson, Mowequa; D. L. Travis, Vandalia; C. R. Andrew, Atlanta, and M. W. Shempf, Taylorville.—(17).

Dr. N. I. Stringer, of Paxton, read a paper on "Hypodermic and Intravenous Medication,"* which was most thoroughly discussed by Drs. W. J. Martin, C. C. Mills, A. G. Alverson, Albert Babb, R. E. Nesbitt, F. H. Barr, J. T. Nattress, C. G. Glendinning and George B. Jones.

Dr. Albert Babb, of Springfield, reported a case of "Plen-alvia in a Holstein Cow."† Discussed by Drs. George B. Jones, C. C. Mills, J. T. Nattress, W. J. Martin and N. I. Stringer.

* Will be found in "Original Articles" department, this month.

† Will be found in "Reports of Cases" department, this month.

At 12 o'clock noon, upon motion, meeting adjourned for lunch, to reconvene at 1.30 P. M. At 1.30 meeting was called to order and reading of papers resumed. Dr. C. G. Glendinning, of Clinton, presenting one entitled "Thermic Fever." Discussed by Drs. L. C. Tiffany, C. C. Mills, W. J. Martin and Albert Babb.

Dr. Fred H. Burt, of Chenoa, read a paper on "Parturient Eclampsia." Discussed by Drs. C. C. Mills, W. J. Martin, W. I. Stringer, Albert Babb, H. H. Presler, George B. Jones and L. C. Tiffany.

Dr. C. C. Mills, Decatur, "Some Successes and Some Failures." Discussed by Drs. W. J. Martin, N. I. Stringer, Albert Babb and L. C. Tiffany.

Dr. W. J. Martin, Kankakee, "Reports of Cases." Discussed by Drs. N. I. Stringer, C. C. Mills, G. Z. Barnes, Albert Babb, R. E. Nesbitt and J. T. Nattress.

Under "Unfinished Business" came the second reading and vote on an amendment to By-Laws offered at the last annual meeting to change Section 1 of Article 2 to read "July" instead of "February." Upon vote being taken was declared unanimously carried.

The following members were appointed by the President to draft resolutions of condolence on the death of Dr. W. H. Curtis, of Meringo, who died at his home after a very brief illness, and while the last annual meeting of this Association was in session: Drs. W. J. Martin, F. H. Barr and Albert Babb.

The following resolutions were unanimously adopted and ordered sent to the family of the deceased, and to be engrossed in the minutes:

"WHEREAS, It has pleased the great Creator of Heaven and Earth to remove from our midst our late friend and professional brother, Dr. W. H. Curtis; be it

"*Resolved*, by the Illinois Veterinary Medical Association in semi-annual convention assembled, that we sincerely condole with the family of our late lamented brother in this their hour of trial and affliction, and devoutly commend them to the keeping of Him who looks with pitying eye upon the widowed and fatherless.

"*Resolved*, That in our natural sorrow for the loss of a faithful and honored friend we find consolation in the belief that it is well with him for whom we mourn.

"*Resolved*, That while we deeply sympathize with those who are bound to our departed brother by the nearest and dearest ties,

we share with them the hope of a reunion in the better world where there are no partings, and bliss ineffable forbids a tear.

"*Resolved*, That these resolutions be spread upon the minutes of this Association, and a copy be transmitted to the family of of the deceased. Signed,

" W. J. Martin }
 " F. H. Barr } *Committee.*
 " Albert Babb. }

The following bills were read and ordered paid: Seals, 75c.; programs, \$5; stamps, \$6; Secretary's fee, \$10; 12,000 letter-heads, \$7; 2000 envelopes, \$5.75. Total, \$34.50.

On motion a vote of thanks was extended to the management of the Illinois Hotel for the use of hall and the kind and courteous treatment extended to the visiting veterinarians.

Nothing more coming before the Association, upon motion, adjourned to meet in annual session in Chicago in December at the call of the President.

Universal good feeling prevailed and all returned home feeling that the 24th semi-annual meeting had been a successful and profitable one.

F. H. BARR, *Secretary.*

VETERINARY MEDICAL ASSOCIATION OF NEW JERSEY.

The semi-annual meeting of this Association was held at the Marlborough Hotel, Asbury Park, July 12th and 13th, 1906, with President T. Earle Budd in the chair.

Many of the members took their families with them. Those present included Dr. and Mrs. T. Earle Budd, Orange; Dr. R. T. Churchill, Secaucus; Dr. and Mrs. J. H. Conover, Flemington; Dr. Robert Dickson, Seabright; Dr. William Gall, Mateawan; Dr. James T. Glennon and mother, Newark; Dr. and Mrs. George F. Harker, Trenton; Dr. V. B. Height, Asbury Park; Dr. and Mrs. L. P. Hurley, Hopewell; Dr. and Mrs. John B. Hopper, Ridgewood; Dr. James McDonough and daughters, Montclair; Dr. E. L. Loblein and family, New Brunswick; Dr. Seth Lockwood, Woodbridge; Dr. J. Payne Lowe and daughter, Passaic; Dr. and Mrs. William Herbert Lowe, Paterson; Dr. Carroll T. Rogers, Woodbury; Dr. T. B. Rogers, Woodbury; Dr. T. E. Smith, Jersey City; Dr. Henry Vander Roest, Newark; Dr. Andrew G. Vogt, Newark; Mr. J. H. Phelan, Norwich Pharmacal Co., Norwich, N. Y.; Dr. Roscoe R. Bell and son, Brooklyn, N. Y.; Dr. S. G. Hendren,

Arlington, N. J.; Dr. A. A. Moody, Mount Holley, N. J.; Dr. Geo. H. Berns, wife and daughter, Brooklyn, N. Y.; Dr. and Mrs. Robert W. Ellis and friend, New York City; Dr. Chas. S. Thompson, Rahway, N. J.; Dr. and Mrs. Chas. B. Helm, Camden, N. J.; Dr. Chas. J. Grauch, Mantura, N. J.

The minutes of the twenty-second annual meeting held at Trenton, Jan. 11, 1906, were read and approved.

In opening the meeting, the President reminded those present that this was the semi-annual meeting and that they had assembled at Asbury Park for recreation as well as for the transaction of business and the reading and discussion of papers. He was glad that so many members had brought their families with them and extended a cordial welcome to guests from neighboring states.

Dr. S. G. Hendren, Arlington, N. J., and Dr. A. A. Moody, Mount Holley, N. J., were proposed for membership. Both names were referred to the Executive Committee, who duly approved of the credentials of both applicants and they were regularly elected to membership.

Dr. T. E. Smith's amendment, introduced at the January meeting, changing the Constitution so that hereafter all officers shall be elected for one instead of two years, was reported favorably by the Executive Committee and finally passed by a unanimous vote.

The following resolutions were offered by Dr. T. B. Rogers and adopted by the Association:

"Resolved, That this Association views with deep regret the failure of the military authorities of the State and the United States to properly recognize the veterinarian by giving him the rank he holds in European armies, and, with the view of bettering the condition of affairs, be it further

"Resolved, That we individually and collectively pledge ourselves to urge by all means in our power, even to the extent of withdrawal of professional recognition, that no member of our society accept the office of army veterinarian until the rank is commissioned."

Dr. T. B. Rogers stated that he had been appointed a committee from the State Board of Veterinary Medical Examiners to confer with the Association to devise means to put a stop to illegal practice in the State. The Association pledged the State Board its support so far as may lie in its power, and, upon motion of Dr. T. E. Smith, \$100.00 was appropriated to the State Board towards the expense of prosecution of illegal practitioners.

Dr. William Herbert Lowe, President of the State Board, was to have spoken on the law regulating veterinary practice in the state and the prosecution of illegal practitioners, but was prevented from doing so by being summoned by the State Board of Health to investigate a serious outbreak of glanders in Middlesex County.

Dr. T. E. Smith acted as Secretary *pro tem* during the absence of Dr. Lowe from the meeting.

Dr. James McDonough delivered before the Association a lengthy discourse on pathological horse shoeing, making a number of demonstrations and exhibiting specimens illustrative of his lecture. A profitable discussion followed Dr. McDonough's lecture, in which a number of experienced veterinary practitioners, including Dr. Geo. H. Berns, of Brooklyn, N. Y., took part.

Dr. Carroll T. Rogers presented on excellent paper on parturient paresis.

A vote of thanks was given to Drs. McDonough and Carroll T. Rogers.

An interesting discussion took place on the subject of osteoporosis, opened by Dr. Roscoe R. Bell, Brooklyn, N. Y.

A portion of the second day was given up to a clinic held at Dr. V. B. Height's Veterinary Hospital, Asbury Park.

The Association voted to hold the next annual convention, January 10, 1907, at Jersey City.

WM. HERBERT LOWE, *Secretary*.

GENESEE VALLEY VETERINARY MEDICAL ASSOCIATION.

The ninth semi-annual meeting was held in Rochester, N. Y., Thursday, July 12th, 1906, with nearly every member present, as well as the following visitors: Dr. W. L. Baker, Buffalo; Dr. Joseph Sutterby, Le Roy; Dr. W. L. Mills, Perry; Dr. A. E. Merry, Syracuse; Dr. F. E. Cleaver, Avon; Prof. W. L. Williams, Ithaca, and others whose names the Secretary failed to get.

Meeting was called to order by the President, Dr. H. S. Beebe, Albion, at Webber Brothers' Veterinary Hospital at 9.30 A. M., and work immediately began on the clinics.

Case 1.—Punctured wound of hip; had been operated on previous to the meeting. Operation described and treatment given.

Case 2.—Broken knee. Wound had been sutured and a counter incision made for drainage. Sutures had given way, leaving a gaping wound, which was being dressed with creolin solution and dusted with boric acid and alum.

Case 3.—Quittor. Had been operated on three weeks previous to meeting. Quarter was removed, necrosed tissue curetted out, wound cleaned with bichloride solution and afterwards dressed with boric acid.

Case 4.—Laminitis, with brain symptoms. Treatment, cathartics, bromide of potash, poultice and the soak tub.

Case 5.—Punctured wound of foot. Piece of wood removed from right heel, seton passed along course of puncture, coming out at plantar surface. Cleansed with antiseptics.

Case 6.—Bay gelding suffering from strangles, parotid gland much swollen. Blister applied to glands and the usual treatment prescribed.

Case 7.—Acute indigestion. Treatment: stomach tube, trocar, chloral and hyposulphite of soda.

Case 8.—Toe-crack.

Case 9.—Punctured wound, end of shaft entering near point of elbow, passing forward nearly to point of shoulder. Washed with antiseptics and packed with gauze.

Case 10.—Injury to shoulder. Antiseptics and hot fomentation prescribed.

Case 11.—Injury to hock. Blister prescribed.

Case 12.—Tumor at point of elbow about four inches in diameter. Operated on by Drs. Webber. Patient placed on operating table, parts cleansed with creolin solution. Ecraseur chain passed around tumor at its base, including the skin, and the whole mass removed. Washed with creolin solution and dusted with boric acid, to be followed by a dressing of lime and charcoal.

Case 13.—Subject found by Humane Society agent, wandering in highway; apparently suffering great pain, continually raising one posterior leg, alternating from right to left, then from left to right; cannot walk in a straight line. A diagnosis of spinal disease was made and the animal destroyed.

Case 14.—Impaction of colon. Aloes, to be followed with oil, was prescribed.

Case 15.—Stringhalt. Operated on by Dr. H. S. Beebe, assisted by Dr. J. E. Clansey. Patient secured on table, parts cleansed and shaven; cocaine injected over seat of operation; an incision made just back of the lateral extensor pedis tendon;

the knife passed under the tendon, and pressure brought to bear on the tendon over the knife with the thumb of the left hand until the tendon gives way, leaving a space between the cut ends which can be plainly felt. Wound washed with lysol solution and bandaged. Two weeks' rest prescribed.

Case 16.—Passing stomach tube by Dr. Taylor.

Case 17.—Collie bitch. Spayed by Dr. Switzer. Patient given $1\frac{1}{2}$ grains of morphine hypodermically. Operation performed through median line.

Case 18.—Mongrel bitch. Spayed by Dr. F. D. Holford, without medication. Incision made in flank and ovaries removed by tortion.

Case 19.—Quittor. Operated on by Prof. W. L. Williams. Patient secured on table, cocaine injected over plantar nerves; the hoof rasped thin over entire quarter; parts shaved and washed with bichloride solution and an elastic bandage applied. An opening was found at the coronet over the external lateral cartilage; this was probed and found to extend downwards to sole; a free opening was made, exposing the end of the probe, to which a piece of tape was fastened and drawn up through the sinus; to this a piece of gauze saturated with tincture of iodine was fastened and drawn down through the sinus. An incision was then made through the coronary band at the front of the foot and at the end of the tumefaction, where a secondary abscess was found; this was packed with cotton soaked in tincture of iodine.

Case 20.—Spavin. Fired by Dr. Carr Webber with no restraint on animal except a twitch. 60 minims of a 5 per cent. solution of cocaine were injected underneath the skin about five minutes before firing.

Case 21.—Was a demonstration by Prof. Williams of his operation for roaring.

The meeting then adjourned to the rooms of the Rochester Club, where it was called to order at 5.30 o'clock.

The application of Doctors Joseph Sutterby, of Le Roy, and William H. Mahonay were received and referred to the Board of censors.

Meeting then opened for the discussion of the various cases and continued until it adjourned for the banquet at 6.30. The banquet was thoroughly enjoyed and will be remembered by all.

At the close of the banquet, Prof. Williams, President of the State Veterinary Medical Society, was requested to speak

in the interest of the meeting at Buffalo. Prof. Williams called attention to the fact that this was the greatest association in the United States, it having the power of appointing the examining board, which has the say of who shall and who shall not practice. It is the duty of every practitioner to support the various associations, as they represent the profession, and give us our standing in society. Our State Society has given its members greater opportunities than any other organization in this country. Dr. Williams urged those who had left the State Society to return, and those who had not been members to make application at once.

During the past few years the meetings had been held either in Ithaca or Brooklyn, no one seeming to dare to invite the Society outside of these cities until this year, when Buffalo, through Dr. W. L. Baker, extended a very cordial invitation. Dr. Williams requested all present to do all in their power to assist Dr. Baker in making the meeting a success.

Dr. Baker then spoke, wishing to say that this was not his meeting, but our meeting, and assuring us that it would be a practical meeting for practical men.

Dr. Tegg assured Dr. Baker that our association would do all in its power to assist in making this meeting a success. He asked for volunteers to read papers at Buffalo. Dr. Switzer, of Oswego, Dr. Roy Webber and Dr. H. Geo. Tegg, of Rochester, and Dr. H. S. Beebe, of Albion, offered to read papers or report cases at Buffalo.

The discussion of the cases and operations of the day was again taken up and continued until a late hour. All who remained felt more than repaid, as many interesting points were brought out in the discussion. J. H. TAYLOR, *Secretary*.

NEW YORK STATE VETERINARY MEDICAL SOCIETY.

BUFFALO, SEPT. 11, 12, AND 13.

The seventeenth annual meeting will occur at the Genesee Hotel, Buffalo, beginning Tuesday morning, Sept. 11, and it is confidently predicted that it will be one of the very best in the history of the organization. A literary program of much promise has been arranged, and several subjects of grave interest to the profession are to be thoroughly discussed by some of the ablest men in the state. The subjects of the papers with the names of the essayists were published in the August number,

and the Secretary informs us that there have been no changes in the data there given.

The clinic is under the direction of Dr. W. L. Baker, of Buffalo, and will be held in the James T. Twitty Riding Academy, 26 East North Street, and is arranged in the form of an amphitheatre, so that all can see the operations.

What is expected to be one of the most pleasant features of the meeting will be a trip to the Maplewood Hackney Stock Farm, where the veterinarians will be entertained by a horse show, made possible through the courtesy of the manager, Mr. E. T. Gay. It has been arranged to take this trip on Wednesday afternoon, 12th, leaving Buffalo on the Erie Railroad at 2.30, arriving at Attica at 3.45, leaving there at 7.14, reaching Buffalo at 8 o'clock, in time for an evening session.

Trips to the various places of interest will be arranged at Buffalo, and all may be assured of a very pleasant and profitable time.

Headquarters will be at the Genesee Hotel, and the sessions will be in one of their banquet halls.

MICHIGAN STATE VETERINARY MEDICAL ASSOCIATION.

This Association will hold its fall meeting at Detroit, Sept. 3 and 4 (State Fair week). The main features will be a clinic and social pleasures. A literary program has been provided for the evening of the 4th. Secretary Black extends a cordial invitation to veterinarians and their families.

DR. M. R. THYNGE, Charlotte, Mich., was seriously kicked by a horse not long since, but has about recovered.

"ACTINOMYCOSIS OR LUMPY JAW," by D. E. Salmon, D.V.M., and Theobald Smith, M.D., which has been reissued by the Bureau of Animal Industry to supercede Circular No. 7 on the same subject.

"THE WESTERN VETERINARIAN" has, phoenix-like, arisen from its ashes, and made its welcome appearance after missing but one issue on account of its baptism of fire. The undaunted spirit displayed by our brethren of San Francisco is worthy of all praise, and we hope some day to see the *Western Veterinarian* as large as the REVIEW, for it aims high for progress, and we need such journals in the struggle to elevate veterinary medicine and so purify the ranks of our profession.

NEWS AND ITEMS.

DR. WM. VEIT, V. M. D., West Chester, Pa., has entered the service of the Bureau of Animal Industry and has been assigned to duty at the Union Stock Yards, Chicago.

It was stated at the New Haven meeting of the A. V. M. A., that in consequence of the great disaster which had befallen the Golden Gate, the San Francisco Veterinary College had terminated its existence.

DOCTOR LIAUTARD writes that he has had lately the great pleasure and pleasant surprise of receiving a postal card from Helena, Montana, with the greetings and regards of Doctors Knowles and Pearson. Dr. L. returns his thanks and his regards.

DR. B. T. WOODWARD, Recording Secretary of the Pennsylvania State Veterinary Medical Association, Oxford, Pa., has entered the service of the Bureau of Animal Industry, and has been assigned to duty on the meat inspection force at Chicago, Ill.

DR. R. W. A. ENGLISH, of Jersey City, N. J., had the misfortune to be in a runaway accident last month, and suffered a severe compound fracture of the leg, and at the time of our information there was grave danger of the necessity of amputation of the extremity.

SPECIMEN VETERINARY "NEWS" ITEM FROM THE DAILY PRESS.—*Waterbury, Conn., Aug. 18.*—Love for his horse has caused James Stone, of Thomaston, to spend hundreds of dollars to save the life of "Tom," a big truck horse, suffering from a throat affliction. "Tom" is the only horse in the world to undergo the delicate operation of tracheotomy and now he is breathing through a silver tube eight inches long. He will undergo a second operation in New Haven this week, when professors from the Yale medical school will assist the veterinarians.—(*N. Y. American, Aug. 18.*)

DR. V. A. MOORE is still in Anaconda, Montana, investigating the smelter smoke cases which are the subject of a large law suit brought by the stockmen against the mine-owners, claiming that innumerable deaths of live stock are due to the smoke. The mine authorities are combatting the contention with the statement that the cause of death is probably a contagious disease. In consequence, they have locked horns for a fight to the death, and each side has been monopolizing some of the best veterinary talent in the country for some months.

While we do not know how many there are actually engaged in the special scientific investigation, we know that Dr. D. McEachran, Dr. D. E. Salmon, Dr. Leonard Pearson, Dr. V. A. Moore, Dr. M. E. Knowles and a number of local men have been on the job. When a legal decision is reached the REVIEW will endeavor to get the scientific story of the battle for its readers.

"CALF SCOURS: A NEW TREATMENT," by Louis A. Klein, V. M. D., Professor of Veterinary Science, Clemson Agricultural College, South Carolina, being Bulletin 122, of the Agricultural Experiment Station, was received some little time ago, and we have been hoping to publish it in full, but on account of the pressure on our pages have not found it possible. We append here the summary of the bulletin: "Twelve milk-fed calves affected with 'scours' were treated by adding formalin to the milk in the proportion of one part of the drug to 4,000 parts of milk. Eleven recovered without any additional treatment—seven on the second day after the use of the formalin was begun, three on the third day and one on the ninth. The other calf (No. 11) required additional treatment, but finally recovered. Three cases of 'scours' in calves being fed on grain and running at pasture were treated with formalin, but the drug did not prove effective in this variety of the disease."

"EXPERIMENTS WITH MILK ARTIFICIALLY INFECTED WITH TUBERCLE BACILLI" is the title of Bulletin No. 86 of the Bureau of Animal Industry, and is the work of E. C. Schroeder, M. D. V., Superintendent of Experiment Station, and W. E. Cotton, Expert Assistant in Experiment Station. In this 19 page bulletin the authors have reached some important conclusions: (1) That the high susceptibility of guinea-pigs to tuberculosis holds good only when the infectious material is introduced into the body in a way in which it can not escape through the natural excretory organs. (2) That the localization of tuberculous disease in the lung of an animal gives us no information as to the point at which the infectious material entered. (3) That it is not necessary to account for the great frequency with which tuberculosis localizes itself in the lung by supposing that the most common form of exposure to tuberculosis is through the respiration. (4) That the experiments, taken as a whole, direct special attention to the danger sustained through exposure to tuberculous material that enters the body with the food. This fact can not be too strongly emphasized.

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VETERINARY MEDICAL ASSOCIATION MEETINGS.

Secretaries are requested to see that their organizations are properly included in the following list.

Name of Organization.	Date of Next Meeting.	Place of Meeting	Name and Address Secretary.
American V. M. Ass'n.....	August, 1907.	.....	R. P. Lyman, Hartford, Ct.
Vet. Med. Ass'n of N. J.....	Jan. 10, 1907.	Jersey City.	W. H. Lowe, Paterson.
Connecticut V. M. Ass'n.....	Call of President	New Haven.	B. K. Dow, Willimantic.
New York S. V. M. Soc'y...	Sept. 11-12-13	Buffalo.	G. T. Stone, Binghamton.
Schuylkill Valley V. M. A....	Dec. 19	Reading.	W. G. Huyett, Wernersville.
Passaic Co. V. M. Ass'n.....	Monthly.	Paterson, N. J.	H. K. Berry, Paterson, N. J.
Texas V. M. Ass'n.....	Call Exec. Com.	.....	E. L. Lewis, Waxahachie.
Massachusetts Vet. Ass'n.....	Monthly.	Boston.	F. J. Babbitt, Lynn, Mass.
Maine Vet. Med. Ass'n.....	.....	.....	R. E. Freeman, Dexter.
Central Canada V. Ass'n.....	.....	Ottawa.	A. E. James, Ottawa.
Michigan State V. M. Ass'n...	State Fair week	Detroit.	Judson Black, Richmond.
Alumni Ass'n N. Y.-A. V. C...	April, 1907.	141 W. 54th St	W. C. Miller, N. Y. City.
Illinois State V. M. Ass'n....	Dec., 1906.	Chicago.	F. H. Barr, Pana.
Wisconsin Soc. Vet. Grad....	Call of Pres't.	Sheboygan.	S. Beattie, Madison.
Illinois V. M. and Surg. A....	.....	Decatur.	C. M. Walton, Rantoul.
Vet. Ass'n of Manitoba.....	Not Stated.	Winnipeg.	F. Torrance, Winnipeg.
North Carolina V. M. Ass'n...	.....	.....	T. B. Carroll, Wilmington.
Ontario Vet. Ass'n.....	.....	.....	C. H. Sweetapple, Toronto.
V. M. Ass'n New York Co....	Vacation.	141 W. 54th St	D. J. Mangan, N. Y. City.
Ohio State V. M. Ass'n.....	.....	Columbus.	W. H. Gribble, Wash'n C. H.
Western Penn. V. M. Ass'n...	1st Wed. ea. mo	Pittsburgh.	F. Weitzell, Allegheny.
Missouri Vet. Med. Ass'n....	.....	.....	F. F. Brown, Kansas City.
Genesee Valley V. M. Ass'n...	.....	Rochester.	J. H. Taylor, Henrietta, N. Y.
Iowa State V. M. Ass'n.....	.....	.....	H. C. Simpson, Denison, Ia.
Minnesota State V. M. Ass'n	2d Wed. Thur., Jan.	St. Paul.	C. A. Mack, Stillwater.
Pennsylvania State V. M. A...	Sept. 18	Gettysburg	C. J. Marshall, Philadelphia
Keystone V. M. Ass'n.....	2d Tues. May	Philadelphia.	A. W. Ormeston, 102 Her- man St., Germantown, Pa.
Colorado State V. M. Ass'n...	1st Mon. in June	Denver.	M. J. Woodliffe, Denver.
Missouri Valley V. Ass'n	January, 1907	Kan. City, Mo.	B. F. Kaupp, Kansas City.
Rhode Island V. M. Ass'n....	June and Dec.	Providence.	T. E. Robinson, Westerly, R. I.
North Dakota V. M. Ass'n...	.....	.....	J. A. Winsloe, Cooperstown.
California State V. M. Ass'n...	Mch. Je. Sep, Dec	San Francisco	C. H. Blemer, San Francisco.
Southern Auxiliary of Califor- nia State V. M. Ass'n....	Jan. Apl. Jy, Oct.	Los Angeles.	J. A. Edmons, Los Angeles.
South Dakota V. M. A.....	.....	.....	E. L. Moore, Brookings.
Nebraska V. M. Ass'n.....	.....	.....	Hans Jenson, Weeping Water
Kansas State V. M. Ass'n....	Jan. 8-9, '07.	Topeka.	Hugh S. Maxwell, Salina.
Ass'n Médecine Vétérinaire Francaise "Laval,".....	1st & 3d Thur. of each month.	Lect. R'm La- val Un'y Mon.	J. P. A. Houde, Montreal.
Alumni Association A. V. Col.	April each yr.	New York.	F. R. Hanson, N. Y. City.
Province of Quebec V. M. A...	.....	Mon. & Que.	Gustave Boyer, Rigand, P. Q.
Kentucky V. M. Ass'n.....	.....	.....	D. A. Piatt, Lexington.
Washington State Col. V. M. A.	Monthly.	Pullman, Wa.	Wm. D. Mason, Pullman.
Indiana Veterinary Association.	.....	.....	E. M. Bronson, Indianapolis.
Iowa-Nebraska V. M. Ass'n...	.....	.....	A. T. Peters, Lincoln, Neb.
Louisiana State V. M. Ass'n...	.....	.....	E. P. Flower, Baton Rouge.
Twin City V. M. Ass'n.....	.....	.....	S. H. Ward, St. Paul, Minn.
Hamilton Co. (Ohio) V. A....	Cincinnati.	Louis P. Cook, Cincinnati.
Mississippi State V. M. Ass'n..	J. C. Robert, Agricultural Col.

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